Chapter One



Lesson (61) Money 1

Outcomes

☞ Students will:

- Participate in Calendar Math activities.
- Compare Egyptian banknotes (1, 5, 10, 20, 50, 100, and 200 LE).
- Estimate monetary value of various items.

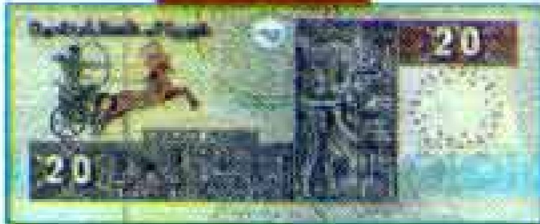
Remember The Egyptian Pound




1 pound


5 pounds


10 pounds


20 pounds


50 pounds


100 pounds

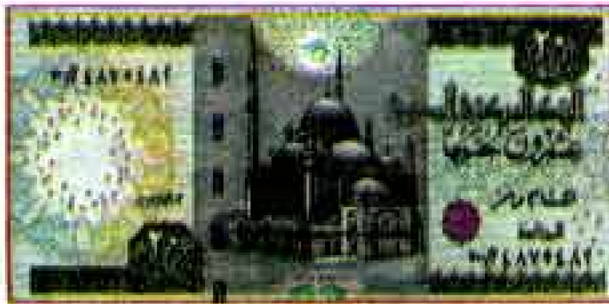

200 pounds





Activities

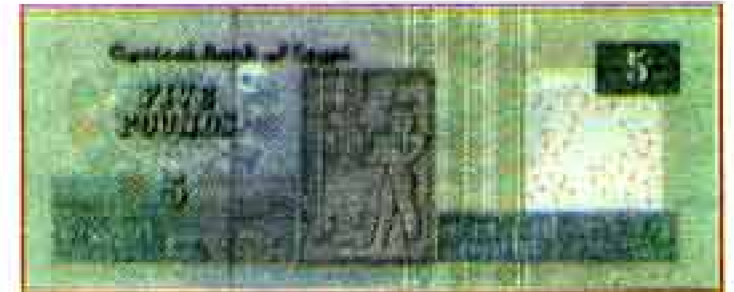
1 Match the equal amounts:






- L.E 1
- L.E 10
- L.E 5
- L.E 200
- L.E 100
- L.E 20
- L.E 50

















2 Write the value of each banknote:



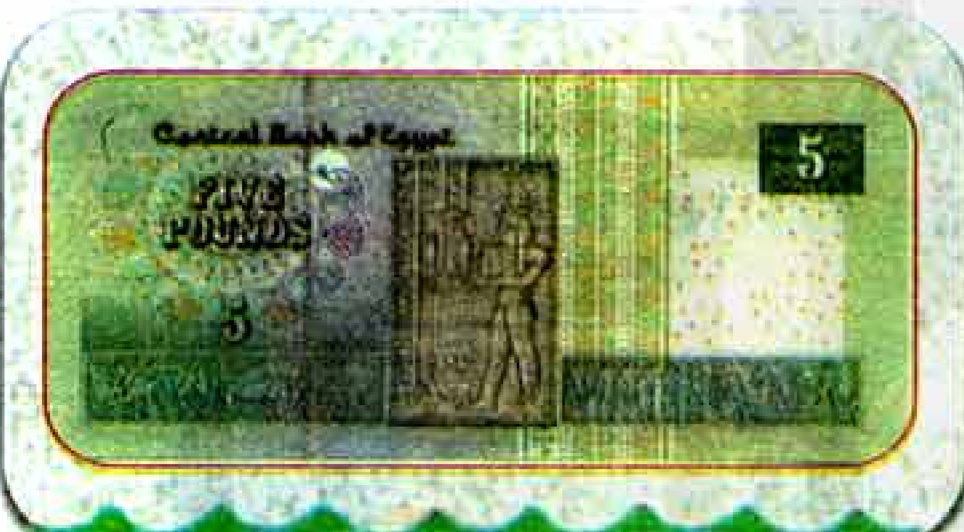
LE ....



LE ....



LE ....



LE ....



LE ....



LE ....



LE ....

Lesson (62) Money 2

Outcomes

Students will:

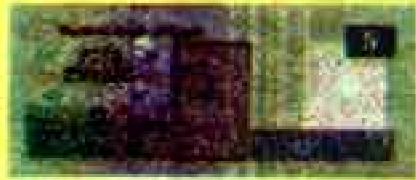
- Participate in Calendar Math activities.
- Combine 1, 5, 10, 20, 50, 100, and 200 LE notes to create a given total.
- Discuss different ways to combine banknotes to create a given total.

Samir went to the store to purchase some fruit. The fruit cost LE 5. He had LE 6 (notes).



How could Samir pay for his fruit?

We can add different banknotes together to come up with LE 5.





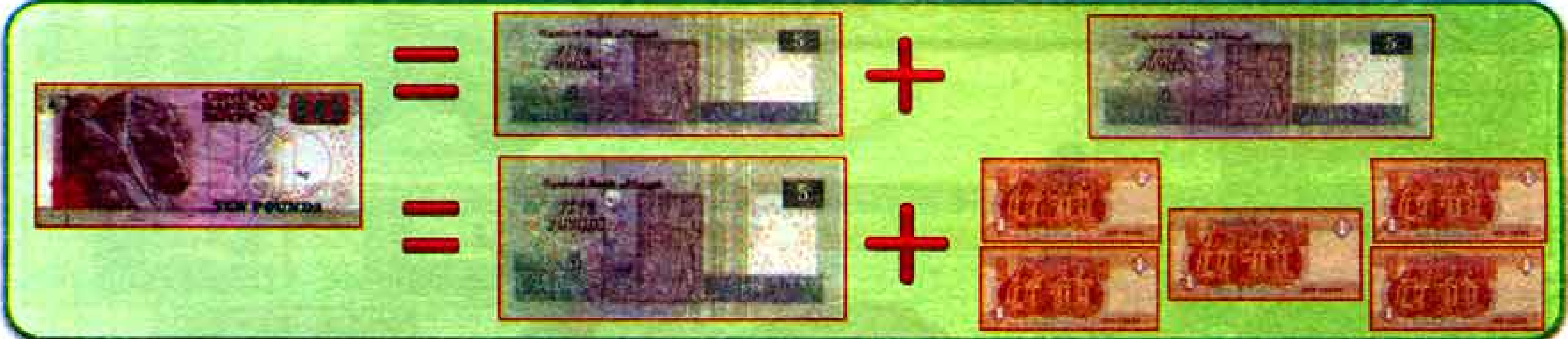


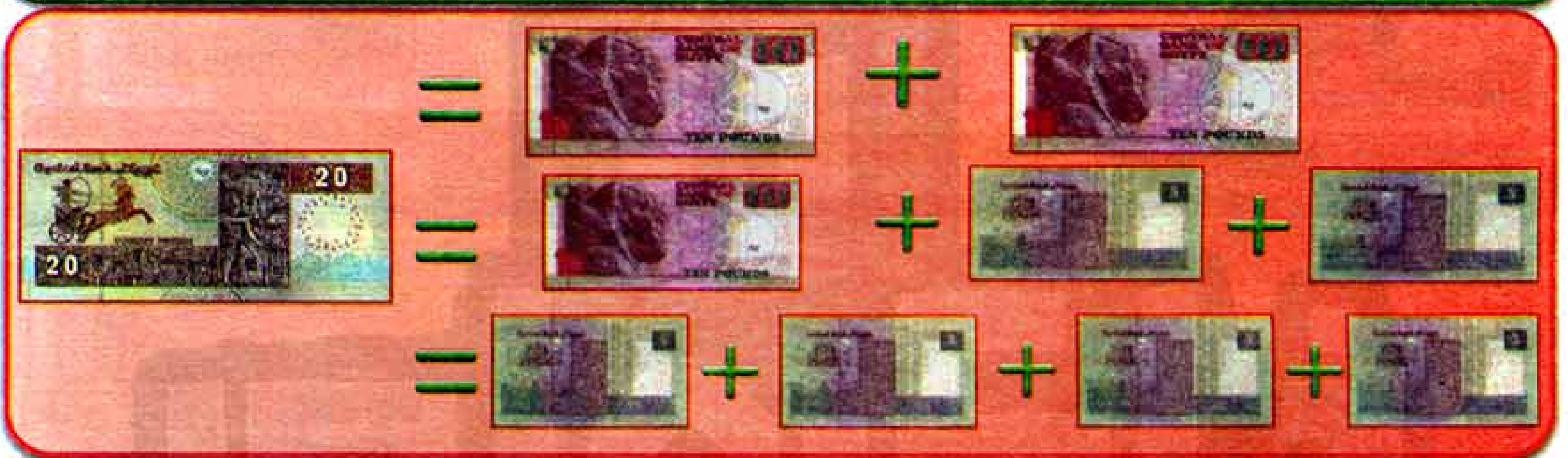

When we have a **larger amount**, we can decompose it into a set of smaller amounts.

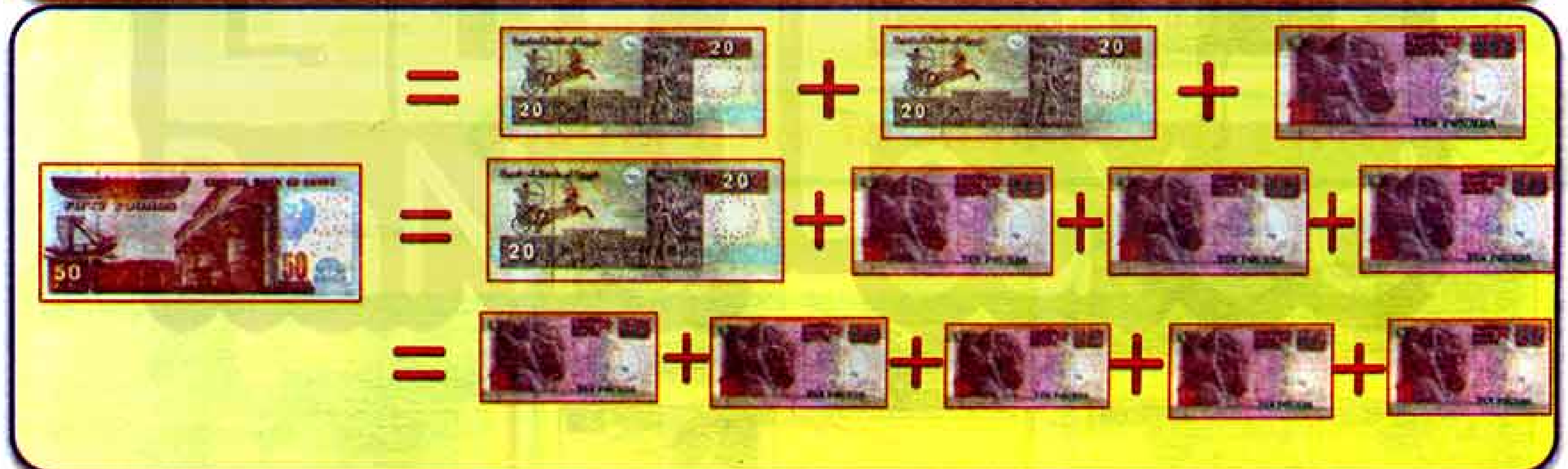


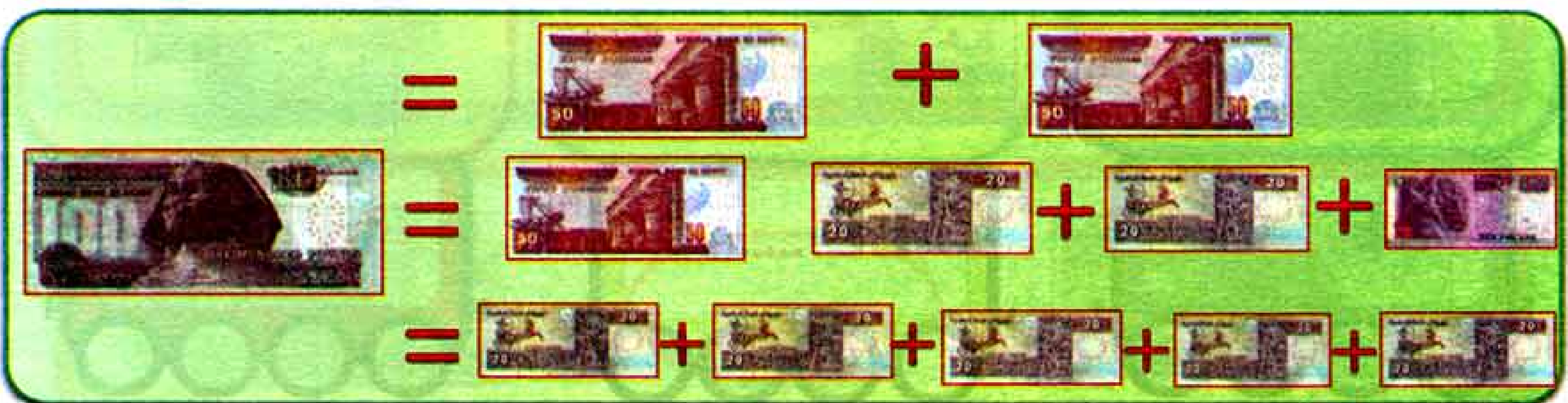














Activities

1 Match the suitable amounts:





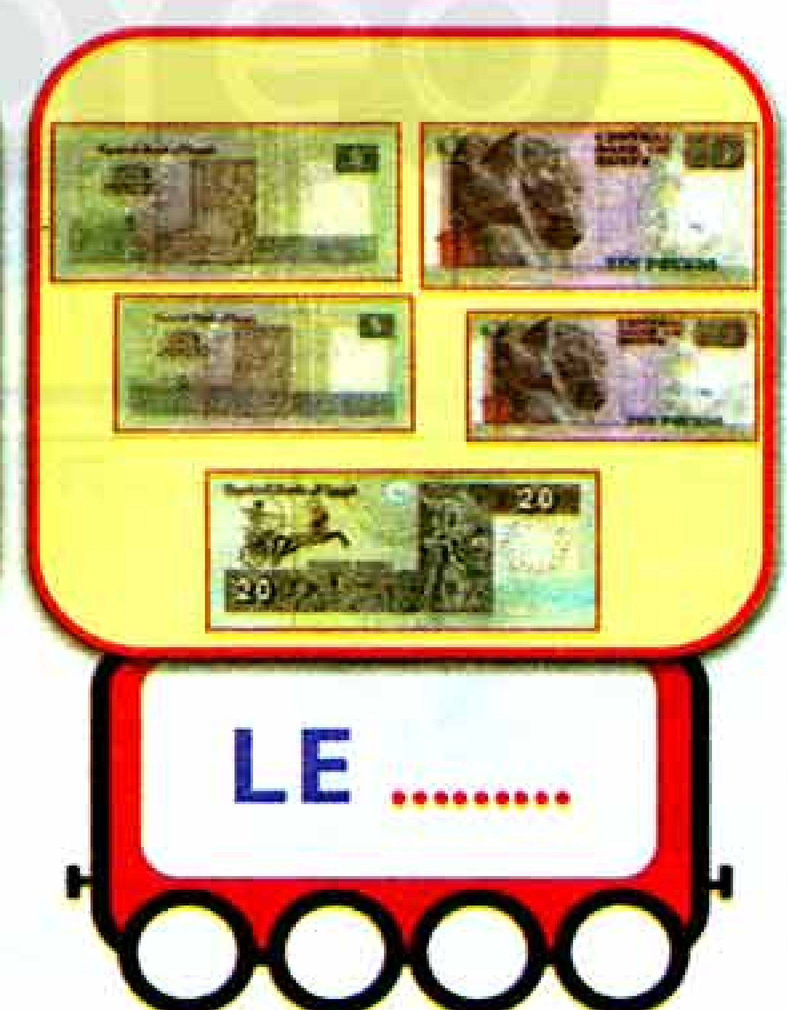
2 Write the amount of each group:



LE ....



LE ....



LE ....



3 Compare using (>, <, =):



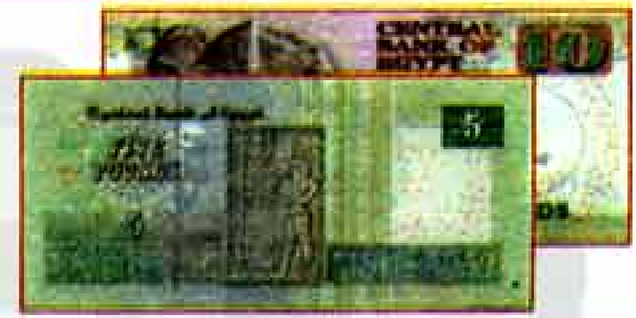








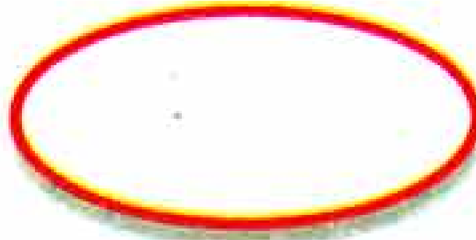










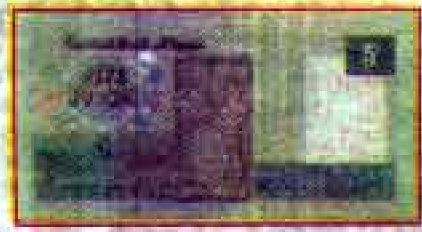




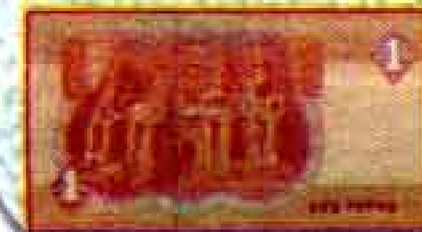
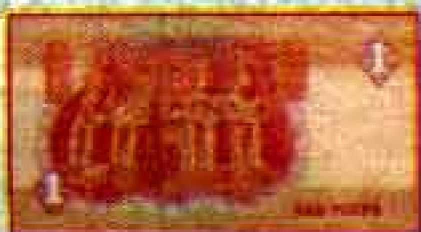
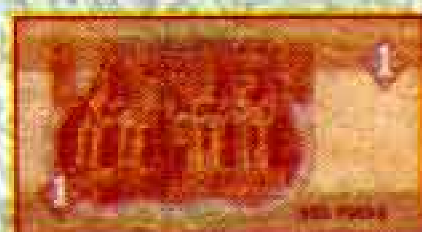


4 Circle the notes to get the given amount:

LE 50



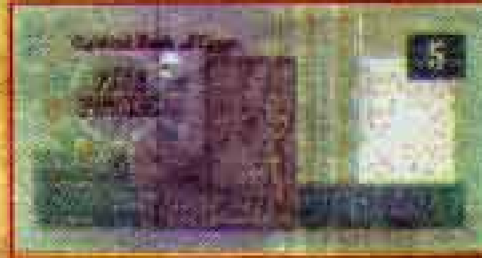




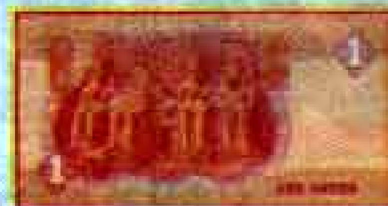
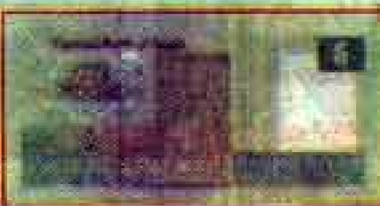
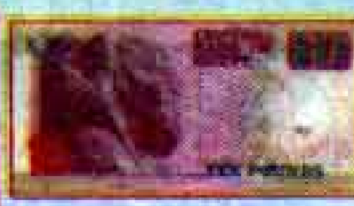
LE 20







LE100

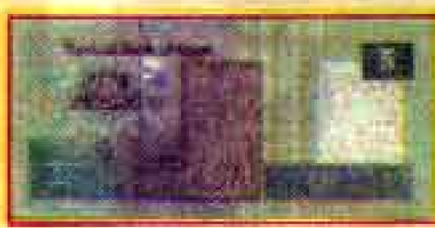
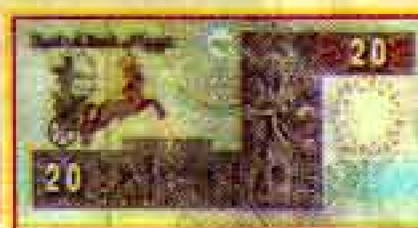







LE200








Lesson (63) Money 3

Outcomes

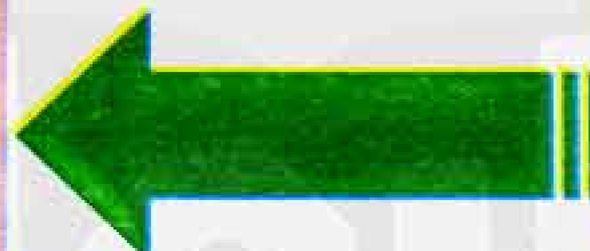
☞ Students will:
- Participate in Calendar Math activities.
- Combine 1, 5, 10, 20, 50, 100, and 200 LE notes to create a given total.
- Decompose large denominations of money into smaller denominations.



Combine







Decompose

Note Decomposing a number means to break up a bigger number into a set of smaller numbers. In money it means to break large amounts into small amounts.

Example: Combine banknotes to make LE 24:

LE24 = LE 20 + LE 1 + LE 1 + LE 1 + LE 1
= LE 10 + LE 10 + LE 1 + LE 1 + LE 1 + LE 1
= LE 10 + LE 5 + LE 5 + LE 1 + LE 1 + LE 1 + LE 1
= LE 5 + LE 5 + LE 5 + LE 5 + LE 1+ LE 1 + LE 1 + LE 1

Try again Combine banknotes to make LE 32.

LE 32= ....





Activities

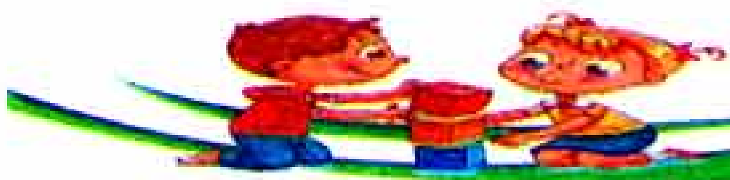
1 Match the equal amounts:

LE 42	LE 20, LE 20, LE 5, LE 5, LE 1, LE 1, LE 1, LE 1
LE 31	LE 50, LE 10, LE 5, LE 1, LE 1
LE 54	LE 5, LE 5, LE 5, LE 5, LE 5, LE 1, LE 1, LE 1, LE 1
LE 29	LE 10, LE 10, LE 10, LE 5, LE 5, LE 1, LE 1
LE 67	LE 50, LE 10, LE 10, LE 1, LE 1, LE 1, LE 1
LE 53	LE 10, LE 10, LE 5, LE 5, LE 1
LE 74	LE 20, LE 20, LE 10, LE 1, LE 1, LE 1



2 Fill in the blanks to get the exact amounts:

LE 43	=	LE 20	LE 10	LE 10	LE 1	LE 1	LE 1		
LE 56	=	LE 20	LE 20	....	....	....			
LE 74	=	LE 50	LE 10	....	....	....	....	....	
LE 46	=	LE 10	LE 10	....	....	....	....		
LE 108	=	LE50	LE20	LE20	....	....	....	....	....
LE 462	=	LE100	LE100	LE100	....	....	....	....	....
LE 167	=	LE 50	LE 50	....	....	....	....	....	
LE 500	=	LE 200	LE 100	LE 50	....	....	....		



3 Draw simple banknotes equal to the price of each item:

1	5	10	20	50	100	200

Example:

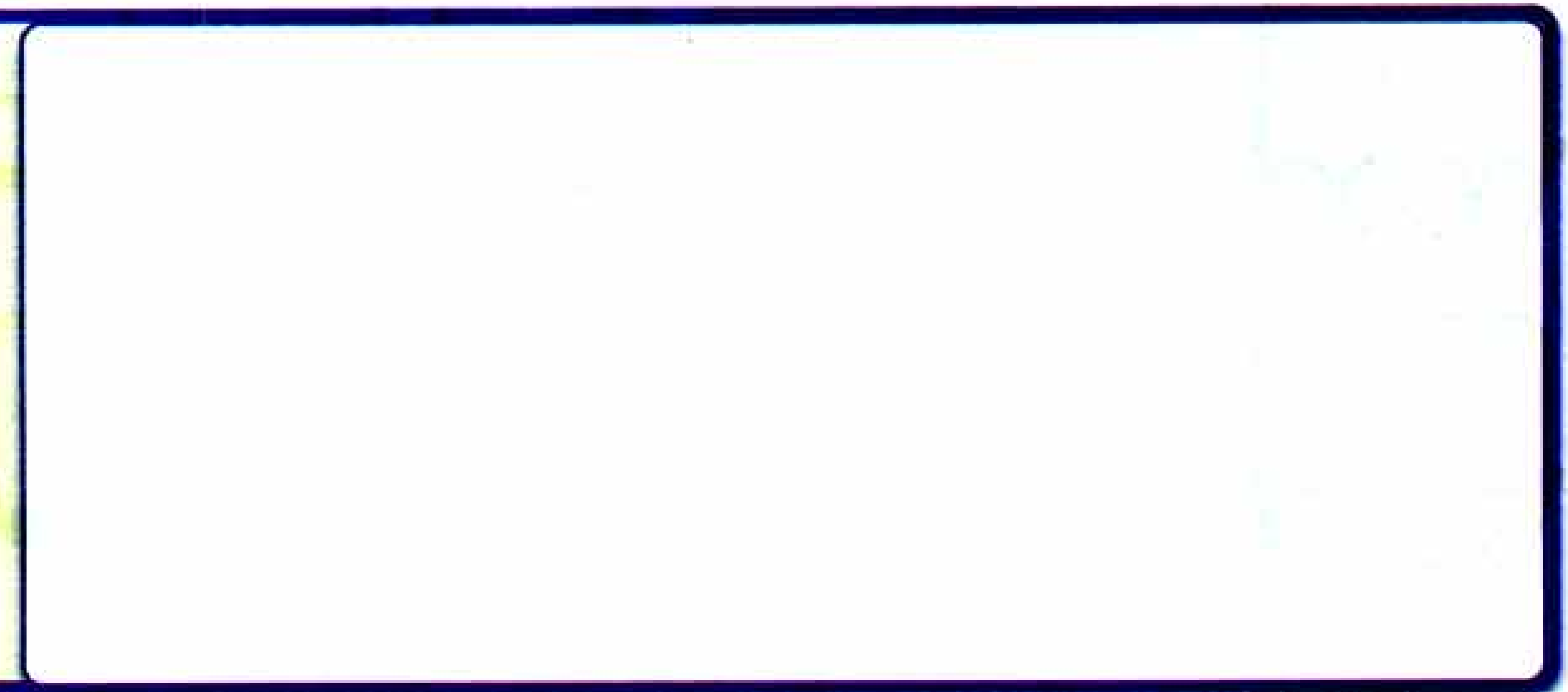


1	20	10
1	20	5











4 Color the banknotes equal to the price:

LE 510	200	200	100	100	10	5	1	1
LE 470	200	200	100	100	100	50	10	10
LE 270	200	200	100	50	10	10	1	1
LE 70	200	200	100	50	10	10	5	1
LE 110	200	200	100	100	10	5	1	1
LE 660	200	200	100	100	100	50	10	1
LE 76	20	20	10	10	10	5	1	1
LE 45	20	20	10	10	5	1	1	1
LE 125	50	50	50	20	10	5	1	1
LE 263	200	100	100	50	10	1	1	1
LE 176	200	100	50	10	10	5	1	1



Lesson (64) Money 4

Counting and adding banknotes

Outcomes

Students will:

- Participate in Calendar Math activities.
- Combine 1, 5, 10, 20, 50, 100, and 200 LE notes to create a given total.
- Identify different ways to combine banknotes to create a given total.

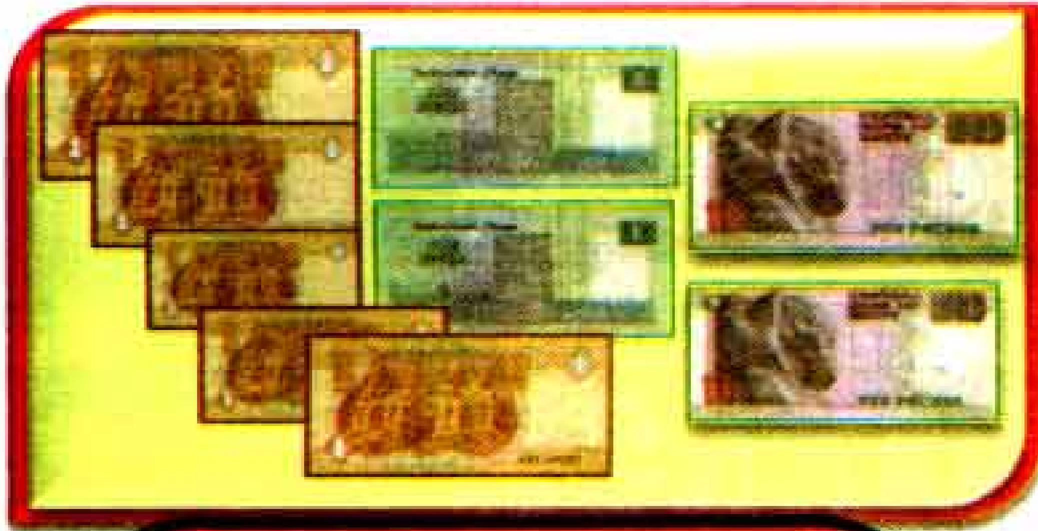
Activities

1 Find the sum:

10 + 3 = ...	20 + 30 + 20 = ...
20 + 5 = ...	70 + 10 + 2 = ...
30 + 40 = ...	60 + 10 + 10 = ...
10 + 7 = ...	60 + 20 + 8 = ...
30 + 9 = ...	20 + 30 + 20 = ...
50 + 30 = ...	50 + 20 + 3 + 5 = ...
10 + 8 = ...	60 + 10 + 20 + 9 = ...
40 + 6 = ...	40 + 30 + 3 + 5 = ...
60 + 5 = ...	10 + 20 + 4 + 30 = ...



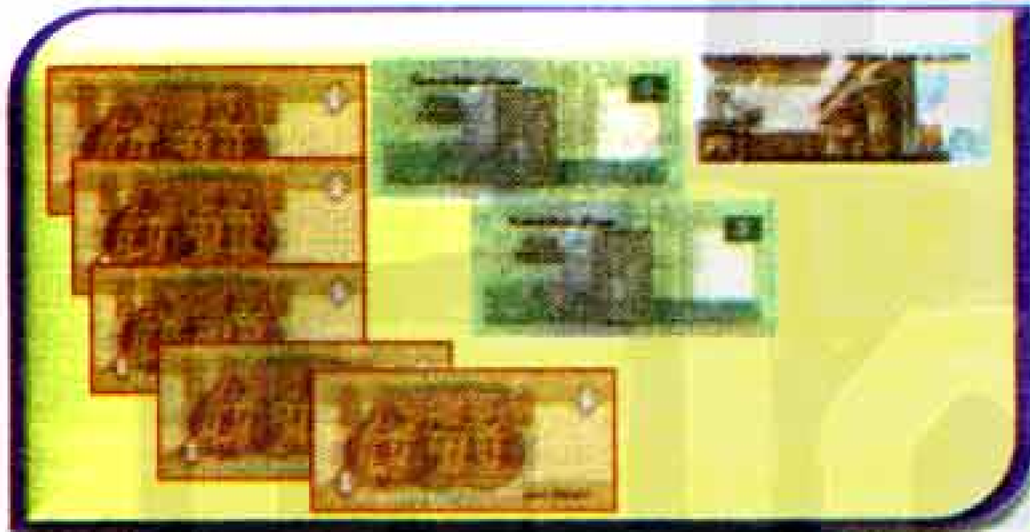
2 Write the total amount of each group:



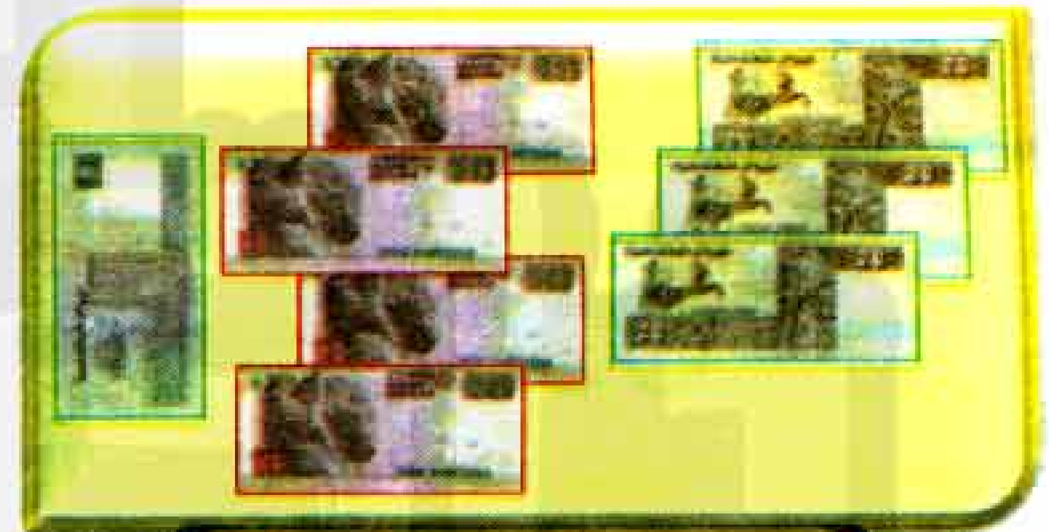
LE ....



LE ....



LE ....



LE ....



LE ....

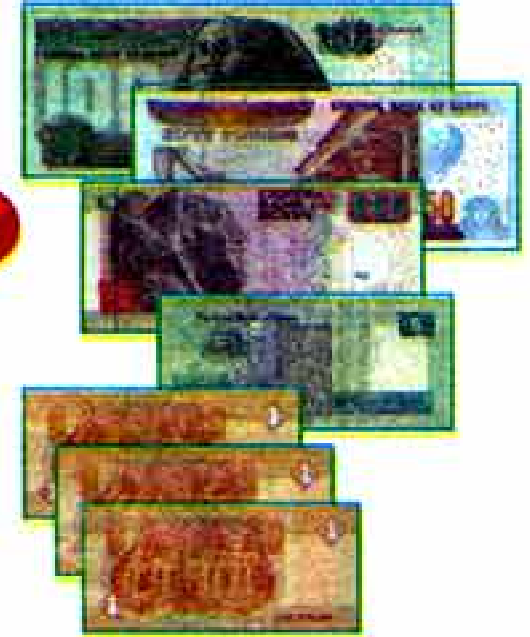


LE ....

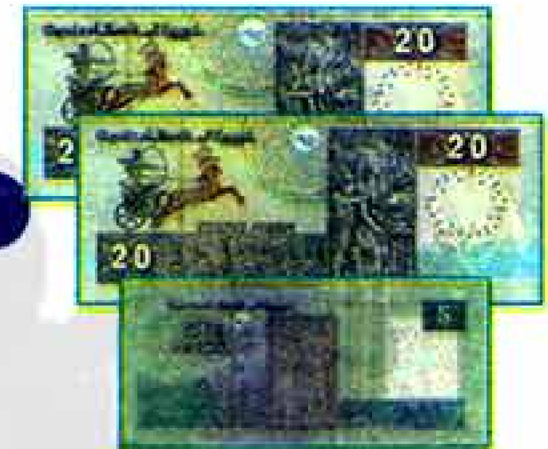


3 Match the equal amount:

LE 100	LE 50	LE 5	LE 1



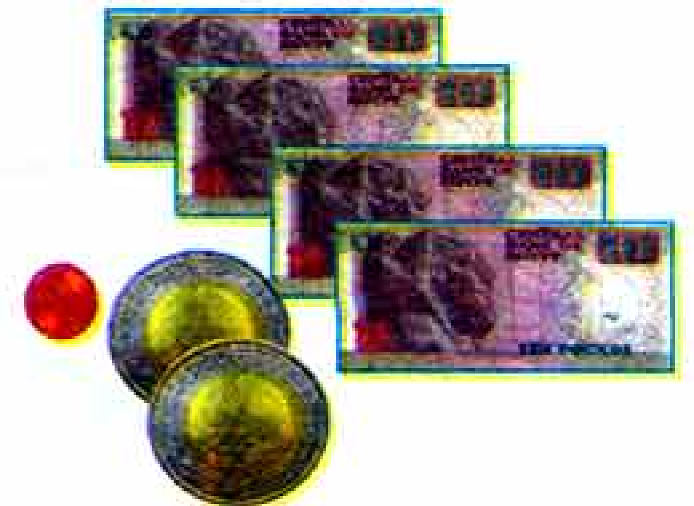
LE 10	LE 10	LE 10	LE 10
LE 1	LE 1		



LE 100	LE 50	LE 10	LE 5
LE 1	LE 1	LE 1	



LE 20	LE 20	LE 5







4 Write the total amounts:

LE 50	LE 10	LE 1	LE 1	LE 1	= LE 63
LE 20	LE 20	LE 10	LE 10	LE 1	= ....
LE 20	LE 10	LE 10	LE 5	=	
LE 1	LE 1	LE 1	LE 1	=	
LE 10	LE 10	LE 1	=		
LE 10	LE 10	LE 5	=		
LE 100	LE 20	=			
LE50	LE30	=			



5 Add the money. Match each total to the suitable price on the right:

LE 100 | LE 20 | LE 10 | LE 1
LE 1 | LE 1 | LE 1



LE 100 | LE 20 | LE 10 | LE 10
LE 5 | LE 1



LE 100 | LE 50 | LE 10 | LE 1
LE 1 | LE 1





LE 50 | LE 20 | LE 5



LE 50 | LE 1 | LE 1 | LE 1
LE 1

Lesson (65) Adding 2-digit and 3-digit numbers without regrouping

Outcomes

Students will:

- Participate in Calendar Math activities.
- Combine (1, 5, 10, 20, 50 and 100) LE notes to create a given total.
- Identify different ways to combine banknotes to create a given total.
- Add 2-digit and 3-digit numbers without regrouping.

Activities

1 Add:

34 + 53 = ...	62 + 24 = ...	73 + 25 = ...	56 + 43 = ...
432 + 54 = ...	653 + 26 = ...	463 + 26 = ...	924 + 23 = ...



2 Add:

42 + 53 = 95	246 + 23 = ...
53 + 21 = ...	632 + 324 = ...
42 + 57 = ...	502 + 130 = ...
143 + 52 = ...	400 + 523 = ...
125 + 73 = ...	821 + 168 = ...

3 You have only LE 50 to spend, tick (✓) as many items as you can without going over budget of LE 50:



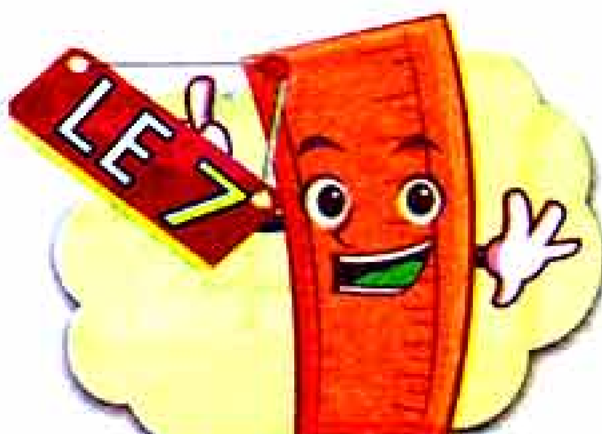
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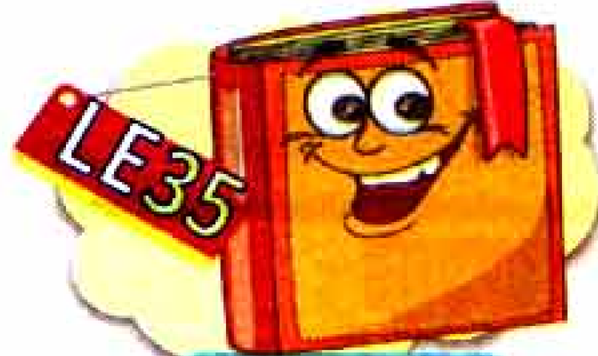
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4 Your budget is LE 200, tick (✓) as many items as you can without going over budget of LE 200:



(..........)



(..........)



(..........)



(..........)



(..........)



(..........)

5 Your budget is LE 100, tick (✓) as many items as you can without going over budget of LE 100:



(..........)



(..........)



(..........)



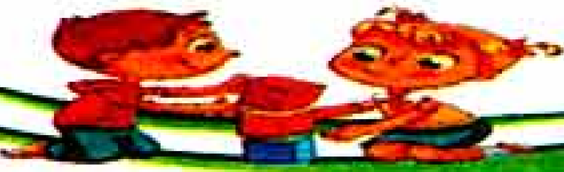
(..........)



(..........)



(..........)



Lesson (66) Adding and subtracting 1

Outcomes

Students will:

- Participate in Calendar Math Activities
- Solve one-step story problems involving money.
- Add and subtract 2- and 3-digit numbers without regrouping.

Example: 1 Zaher has L.E 35 and his brother Hesham has L.E 42. How much money do they have all together?

The total amount =

```
   L.E 35
+  L.E 42
---------
   L.E 77
```

Example: 2 Ali's father gave him L.E 45. Ali bought a book for L.E 23. How much money left with Ali?

Money left with Ali =

```
   L.E 45
-  L.E 23
---------
   L.E 22
```

Activities

1 Solve the following problems:

1) Shaimaa was given L.E 85 for her birthday.
She bought a new pair of shoes for L.E 65.
How many pounds does Shimaa have now?



....

....

....

2) Shahd saved L.E 42 in one week,
the next week she saved L.E 25.
How much money does Shahd have in all?



....

....

....

3) Soha was given L.E 39 for buying something.
She bought a basket of fruit for L.E 16.
How many pounds left with Soha?



....

....

....



4) Wael had 24 pounds, He bought a chocolate for 13 pounds.
How much money does Wael have now?



....

....

5) Tamer bought a book for L.E 55 and a new football for L.E 44.
How much did Tamer pay for all together?



....

....

6) Hany and his brother put their money together to buy a new ball. Hany had L.E 45 and his brother had L.E 54.
How much money do they have all together?



....

....

7) Hend donated LE 45 for Tahia Misr Box, her brother donated LE 42, too. How much money did they donate all together?

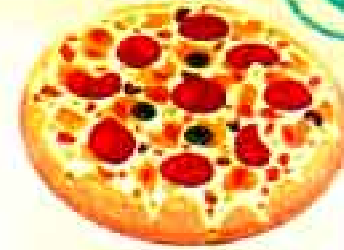
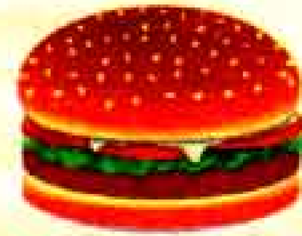
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2 Answer the following questions:

MENU

L.E 20 	L.E 40 
L.E 17 	L.E 24 
L.E 14 	L.E 5 

1) Ahmed had LE 100. He ordered a piece of pizza. How much money remained?

....

2) Enjy ordered a burger and a can of Pepsi. How much money did she pay?

....

3) Hadi ordered an ice cream. Hadeer ordered French fries. How much money did they pay?

....

4) Which is more expensive, a burger and a can of Pepsi together or a pizza alone?

....

Lesson (67) Adding and subtracting 2

Outcomes

Students will:

- Participate in Calendar Math Activities.
- Apply place value concepts to add and subtract money.
- Describe their real-world experiences with money.



The place of a digit in a number tells its value.
In 465, we have 4 Hundreds, 6 Tens and 5 Ones

465 = 400 + 60 + 5

Hundreds	Tens	Ones
4 hundreds blocks	6 tens rods	5 ones cubes

	Hundreds	Tens	Ones
Place value	4	6	5
Value	400	60	5

Hundreds	Tens	Ones
4 hundreds blocks	6 tens rods	5 ones cubes

=

Hundreds	Tens	Ones
4 hundred notes	6 ten notes	5 one notes

465



Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

326

Activities

1 Write the total amount of money:

Hundreds	Tens	Ones

LE ....

Hundreds	Tens	Ones

LE ....

Hundreds	Tens	Ones

LE ....

Hundreds	Tens	Ones

LE ....



2 Complete the following money mat:



Place Value / Money Mat



	Hundreds LE 100	Tens LE 10	Ones LE 1
LE 423	4	2	3
LE 652	....	....	....
LE 729	....	....	....
LE 438	....	....	....
LE 609	....	....	....
LE 530	....	....	....
LE	6	8	9
LE	2	1	6
LE	4	5	3
LE	5	7	5
LE	5	6	8



3 Complete the (H / T / O) chart as the example:

1 | 5 | 10 | 20 | 50 | 100 | 200

Hundreds	Tens	Ones
100 100 100 100 100	10 10 10	1 1 1 1

LE 534

Hundreds	Tens	Ones

LE 231

Hundreds	Tens	Ones

LE 652

Hundreds	Tens	Ones

LE 354

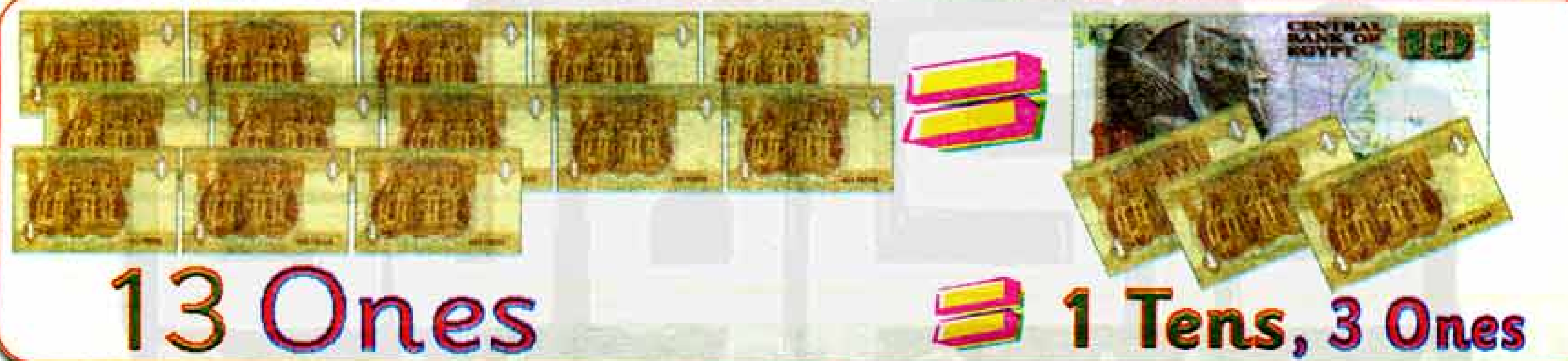
Lesson (68) Adding 2- and 3- digit numbers with regrouping

Outcomes

Students will:
- Participate in Calendar Math activities.
- Apply place value concepts to add money with regrouping.
- Add 2- and 3- digit numbers with regrouping.











Activities

1 Complete the table:

	LE 10	LE 1
LE 14	1	4
LE 16	....	....
LE 10	....	....
LE 17	....	....
LE 19	....	....
LE 6	....	....
LE 15	....	....



2 Complete as the example:

LE 100	LE 10	LE 1
5	6	17
3	6	14
5	8	18
3	4	12

LE 100	LE 10	LE 1
5	7	7
3	7	....
....	....	....
....	....	....



3 Complete as the example:

LE 100	LE 10	LE 1
4	13	5
6	12	7
8	17	3
6	15	2

→

LE 100	LE 10	LE 1
5	3	5
7	....	....
....	....	....
....	....	....

Example: 1 Add LE 560 + LE 350

	LE 100	LE 10	LE 1
	5	6	0
+	3	5	0
=	8	11	0

=

LE 100	LE 10	LE 1
5	6	0
3	5	0
9	1	0

= 910



Add LE 290 + LE 475

	LE 100	LE 10	LE 1
	2	9	0
+	4	7	5
=	6	16	5

=

LE 100	LE 10	LE 1
2	9	0
4	7	5
....	....	....

= ....



Example: 2 Add LE 436 + LE 545

436 + 545 = 11	→ 1 (carry 1): 436 + 545 = 1	→ 1: 456 + 545 = 81	→ 1: 436 + 545 = 981



Remark

1) We should start addition from the ones place or from the right.
2) We can only write a digit up to 9 in any place, so we carry one to the next place if the sum of ones has 2 digits.

Example: 3 Add LE 563 + LE 370

563 + 370 = 3	→ 563 + 370 = 13 3	→ 1: 563 + 370 = 33	→ 1: 563 + 370 = 933









Add with regrouping

362 + 547 = ...	628 + 354 = ...	376 + 228 = ...	624 + 249 = ...
563 + 362 = ...	627 + 291 = ...	460 + 267 = ...	467 + 151 = ...
625 + 140 = ...	258 + 320 = ...	376 + 215 = ...	624 + 294 = ...
553 + 342 = ...	697 + 150 = ...	461 + 167 = ...	167 + 251 = ...



Lesson (69) Subtracting 2- and 3-digit numbers with regrouping



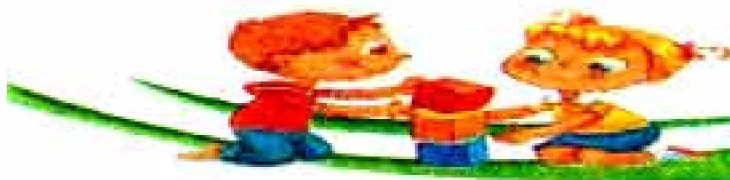
Outcomes

☞ Students will:

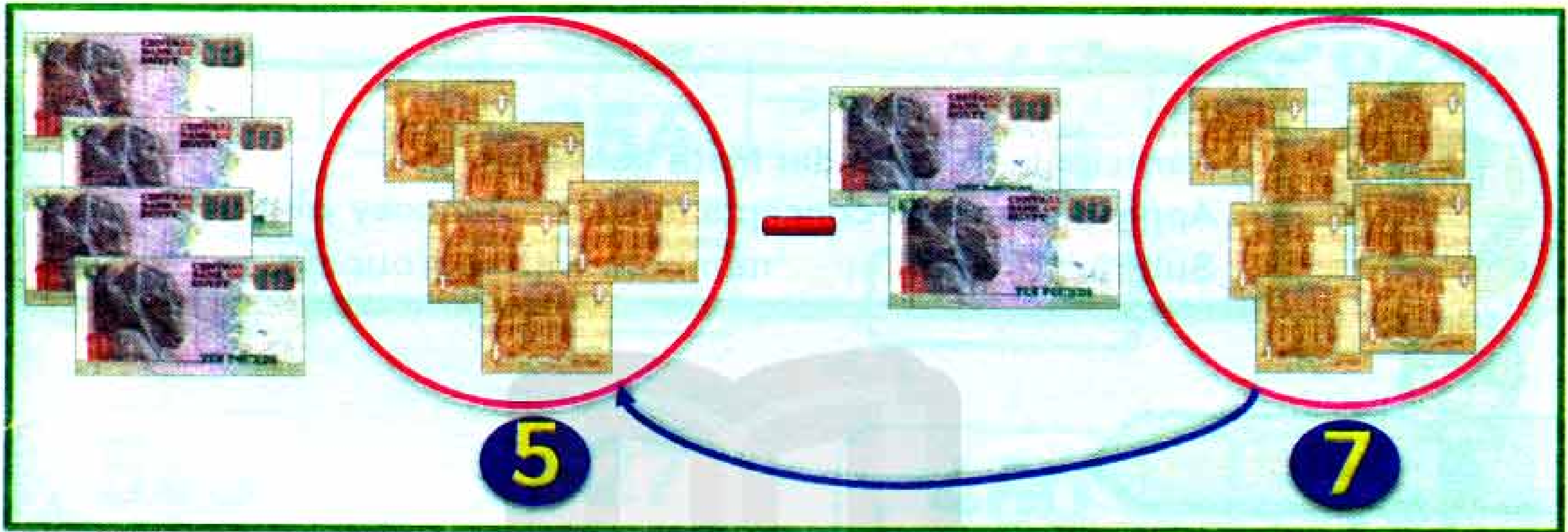
- Participate in Calendar Math activities.
- Apply place value concepts to subtract money with regrouping.
- Subtract 2- and 3-digit numbers with regrouping.

Subtract:

LE 43 − LE 21 = ...	LE 56 − LE 32 = ...	LE 54 − LE 33 = ...
LE 643 − LE 221 = ...	LE 563 − LE 321 = ...	LE 763 − LE 211 = ...
LE 64 − LE 11 = ...	LE 42 − LE 12 = ...	LE 54 − LE 10 = ...



Learn how to subtract LE 27 from LE 45



We can't take 7 away from 5
or we don't have enough ones to subtract 7,
so we'll take one of the LE 10 note and make it ten LE 1 note. We decompose one LE 10 note into ten LE 1 notes.



LE 10	LE 1
4	5
− 2	7

→

LE 10	LE 1
3	15
− 2	7
1	8



Activities

1 Complete the table as the example:

LE 10	LE 1		LE 10	LE 1
6	3	→	5	13
4	5	→	3	....
3	2	→	2	....
6	8	→	....	18
4	0	→	....	10
5	1	→	....	....
3	6	→	....	....

LE 100	LE 10		LE 100	LE 10
4	3	→	3	....
5	6	→	4	....
2	9	→	1	....
3	0	→	....	10
6	7	→	....	17
3	5	→	....	....
8	7	→	....	....

Example: 1

Subtract LE 75 - LE 47

$$\begin{array}{r} 7\ 5 \\ -\ 4\ 7 \\ \hline \square \end{array} \rightarrow \begin{array}{r} \overset{6}{\cancel{7}}\ \overset{15}{\cancel{5}} \\ -\ 4\ 7 \\ \hline \square \end{array} \rightarrow \begin{array}{r} \overset{6}{\cancel{7}}\ \overset{15}{\cancel{5}} \\ -\ 4\ 7 \\ \hline 8 \end{array} \rightarrow \begin{array}{r} \overset{6}{\cancel{7}}\ \overset{15}{\cancel{5}} \\ -\ 4\ 7 \\ \hline 2\ 8 \end{array}$$

LE 75 - LE 47 = LE 28





Subtract with regrouping

Try yourself

54 − 37	65 − 39	76 − 28	67 − 39
....	....	....	....

56 − 47	80 − 36	71 − 24	90 − 63
....	....	....	....

LE 53 - LE 37 = ...

LE 46 - LE 37 = ...

LE 30 - LE 19 = ...

LE 67 - LE 49 = ...

LE 63 - LE 48 = ...

LE 55 - LE 39 = ...

LE 72 - LE 36 = ...

LE 65 - LE 27 = ...

LE 83 - LE 46 = ...

LE 60 - LE 37 = ...

LE 60 - LE 55 = ...

LE 72 - LE 15 = ...





Subtract and color then match:





















Lesson (70) Adding and subtracting 2-digit and 3-digit numbers with regrouping



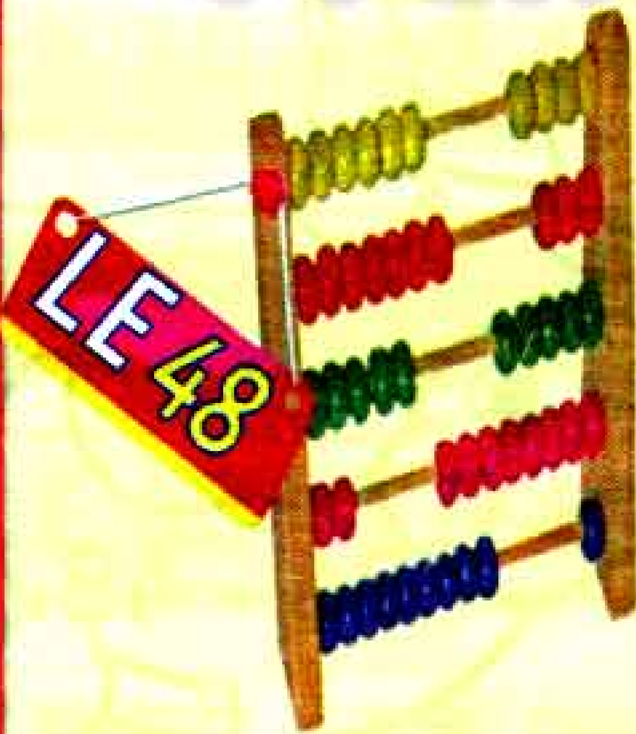
☞ Students will:
- Participate in Calendar Math activities.
- Apply place value concepts to solve story problems involving money.
- Add and subtract 2- and 3-digit numbers with regrouping.

Example 1

Nora went to the market and bought fruit, vegetables and eggs. She spent LE 325 and she bought a toy for LE 48.

How much money did she spend in all?

The problem is addition problem







$$\begin{array}{r} 325 \\ +\ 48 \\ \hline \text{LE}373 \end{array}$$





2

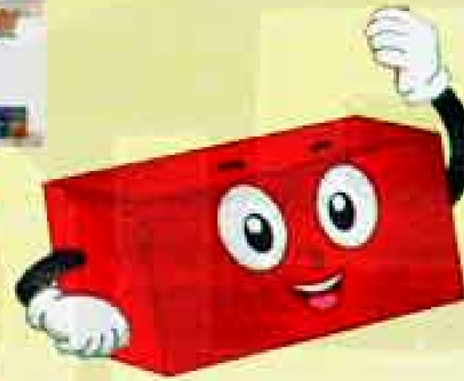
Amir made LE 940 working for a small company. He bought himself some new pants for LE 370.

How much money left with him?

The problem is subtraction problem

940
- 370
....









Try yourself

Put (+) in front of the addition sum and (-) in front of the subtraction sum:

1) Ahmed bought a pen for LE 10 and a notebook for LE 5. How much money did he pay? (..................)

2) Ahmed had LE 20. He gave his younger brother LE 5. How much money remains? (..................)



Activities



Answer the following questions:

1) Roby had LE 56 in her purse. Mona gave her LE 173. How much money does Roby have now?

....

2) Mariam had LE 100, she gave her brother LE 50. How much money does Mariam have now?

....

3) Ola had LE 170. She bought mangoes for LE 35. How much money left with her?

....

4) Walaa has LE 360, and Hamza has LE 460. How much money do they have all together?

....



5) Ahmed spent LE 153, Mahmoud spent LE 290. How much less money did Ahmed spend than Mahmoud?

....

6) Hanan bought a toy with LE 59, and a book for LE 76. How much money did she pay all together?

....

7) Somaya has LE 467 and Salma has LE 339. How much more money does Somaya have than Salma?

....

8) Roshdy received LE 259 from his father on Friday and LE 372 from his uncle on Sunday.

How much money did he receive in total?

....

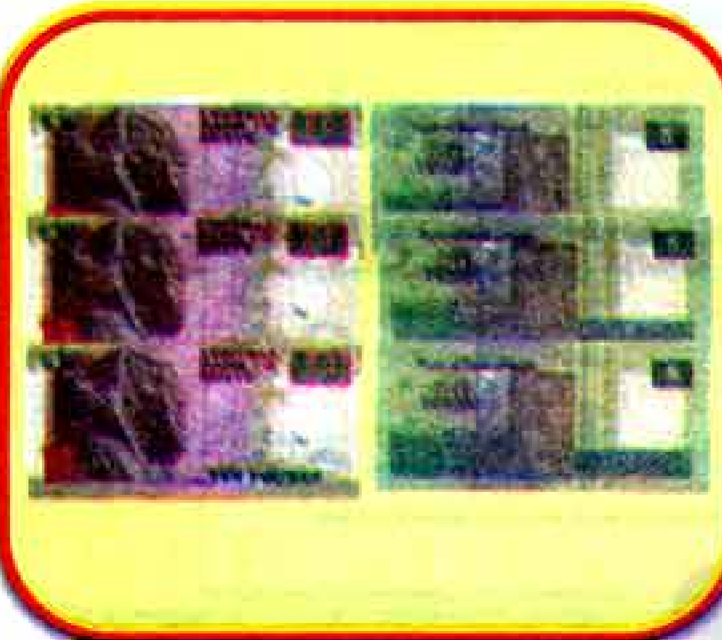




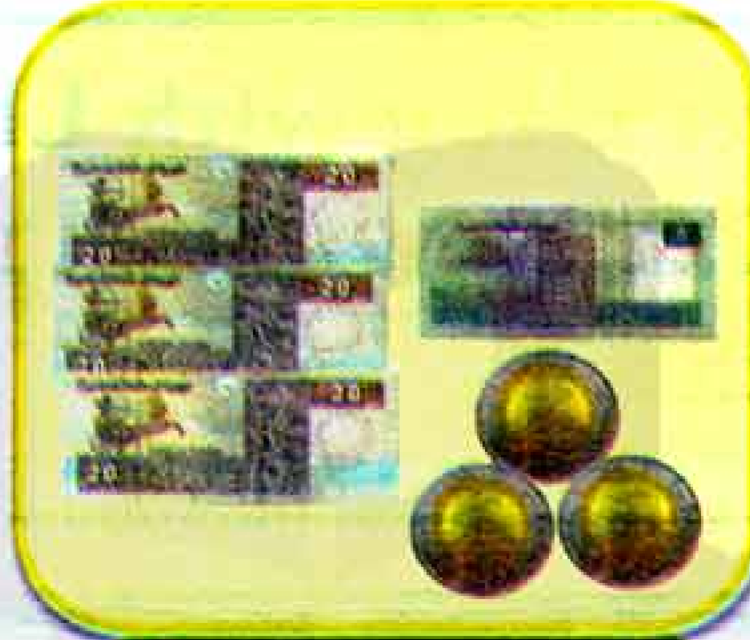
Review on Chapter (1)



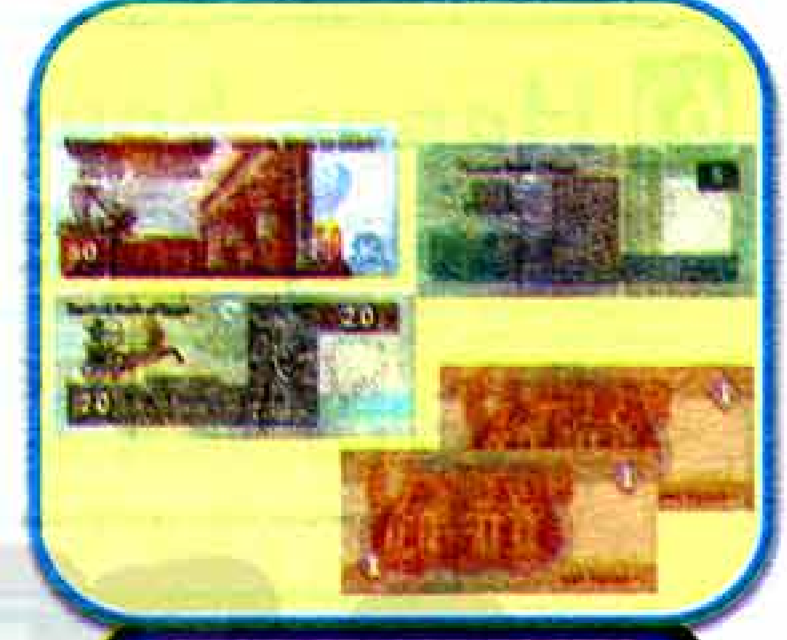
1 Write the equal amounts:



LE ....



LE ....



LE ....



LE ....



LE ....



LE ....





2 Look at the price , then answer the following questions:



- Color two things you can buy for LE 150 in green.
- Color two things you can buy for LE 60 in red.
- Color two things you can buy for LE 140 in blue.
- Color two things you can buy for LE 220 in yellow.
- If you want to buy a watch, T-shirt and a ball,

  how much money will you pay?

Amount = LE .... + LE .... + LE .... = LE ....



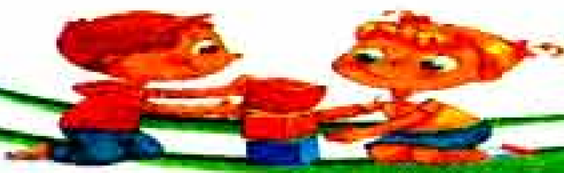
3 Complete:

LE 64 + LE 33 = LE	LE 36 + LE 52 = LE	LE 74 + LE 13 = LE ....
LE 243 + LE 325 = LE	LE 367 + LE 523 = LE	LE 627 + LE 35 = LE ....
LE 112 + LE 59 = LE	LE 240 + LE 110 = LE	LE 80 + LE 70 = LE ....



4 Complete:

LE 42 − LE 21 = LE	LE 75 − LE 52 = LE	LE 68 − LE 13 = LE ....
LE 235 − LE 122 = LE	LE 746 − LE 222 = LE	LE 426 − LE 135 = LE ....
LE 617 − LE 255 = LE	LE 716 − LE 592 = LE	LE 314 − LE 263 = LE ....



5 Life problems:

1) Saher had LE 270. He bought a ball for LE 50. How much money does Saher have now?



....

2) Hamza has LE 340, and his brother Youssef has LE 372. How much money do they have all together?



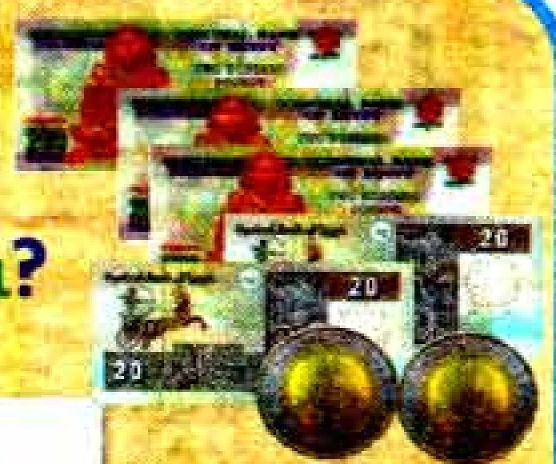
....

3) If Ibrahim's father gave him LE 50, and he bought a ball for LE 25.
How much money remains with Ibrahim?



The remainder = ...

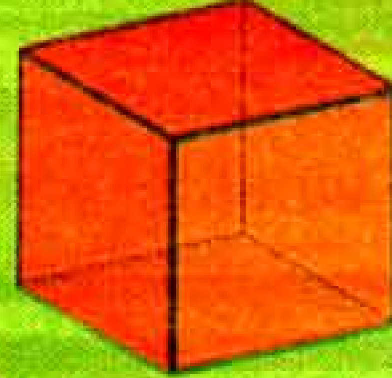
4) Mona saved LE 642. She donated LE 245 for a hospital.
How much money remained with Mona?



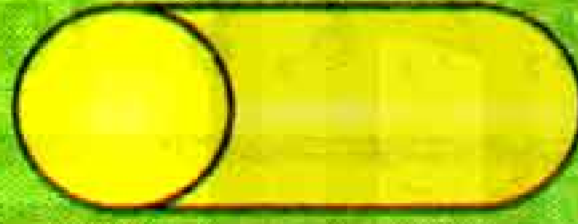
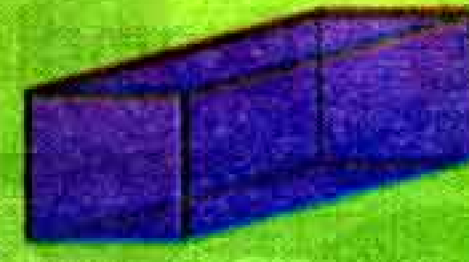
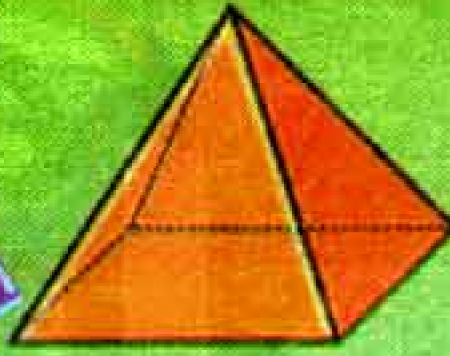
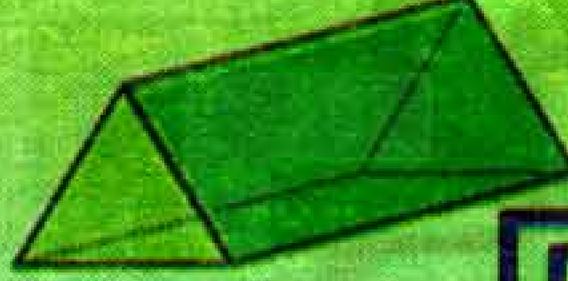
The remainder = ...

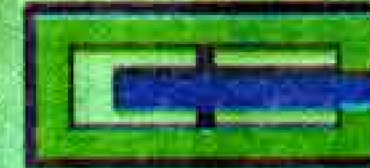
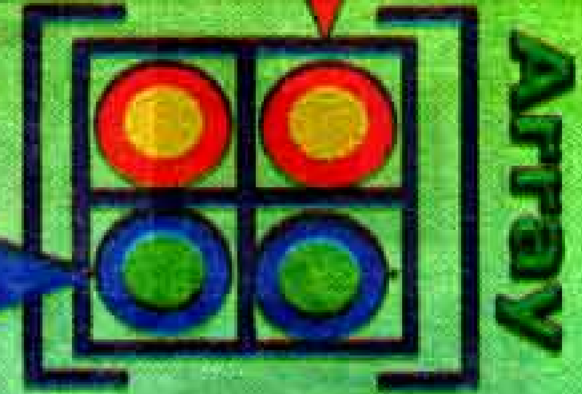
Chapter Two





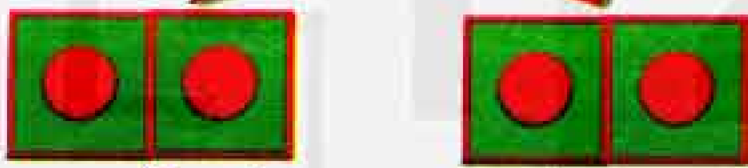
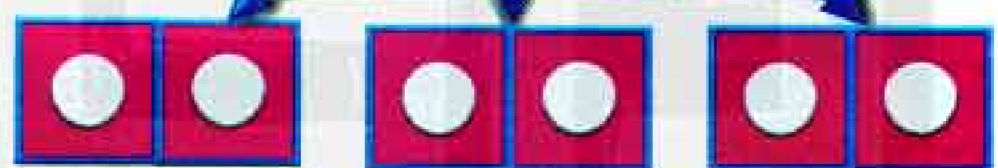
Lesson (71) Even / Odd numbers 1

Outcomes

Students will:
- Participate in Calendar Math activities.
- Determine whether a number is even or odd.

Even Number shows pairs with no cubes left over.
Example: (2, 4, 6, 8, 10, 12, ...)

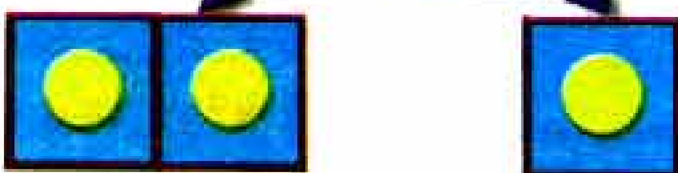
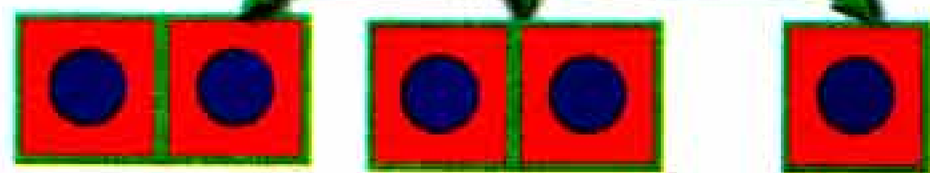
Example: 4 6

4 is even 6 is even

Odd Number shows pairs with one cube left over.
Example: (3, 5, 7, 9, 11, 13, ...)

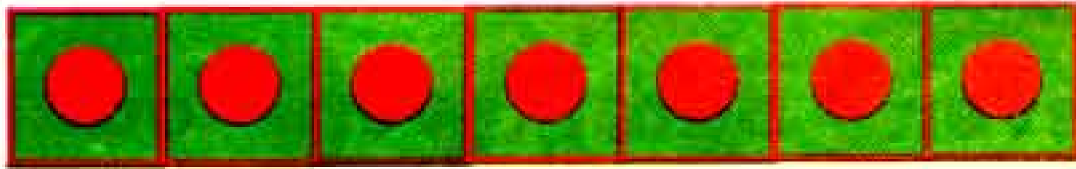
Example: 3 5

3 is odd 5 is odd

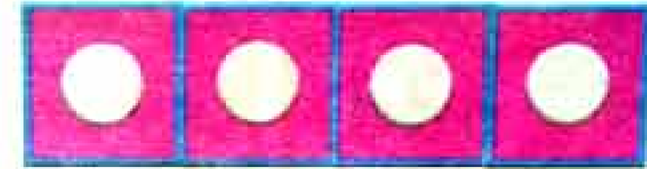
Activities

1 Write the number of cubes, then circle even or odd:



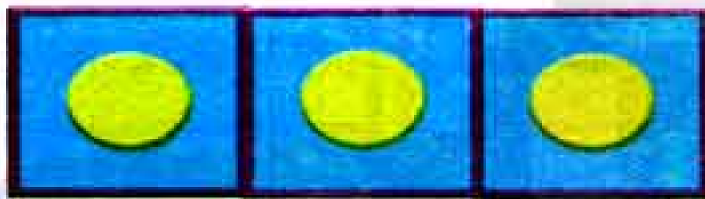
Number: ---------

(even – odd)



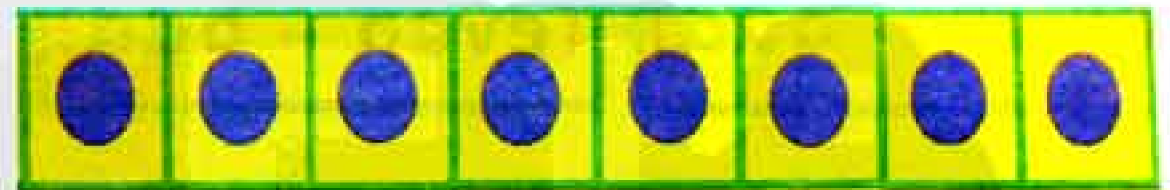
Number: ---------

(even – odd)



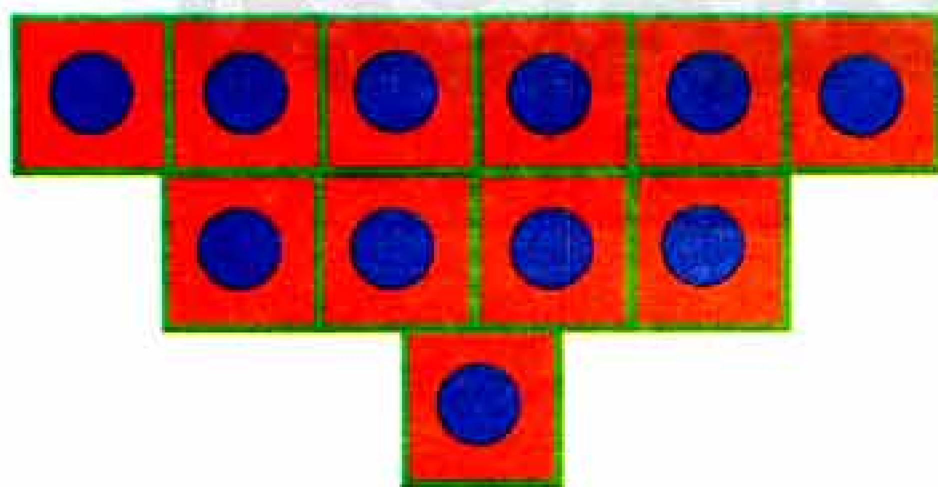
Number: ---------

(even – odd)



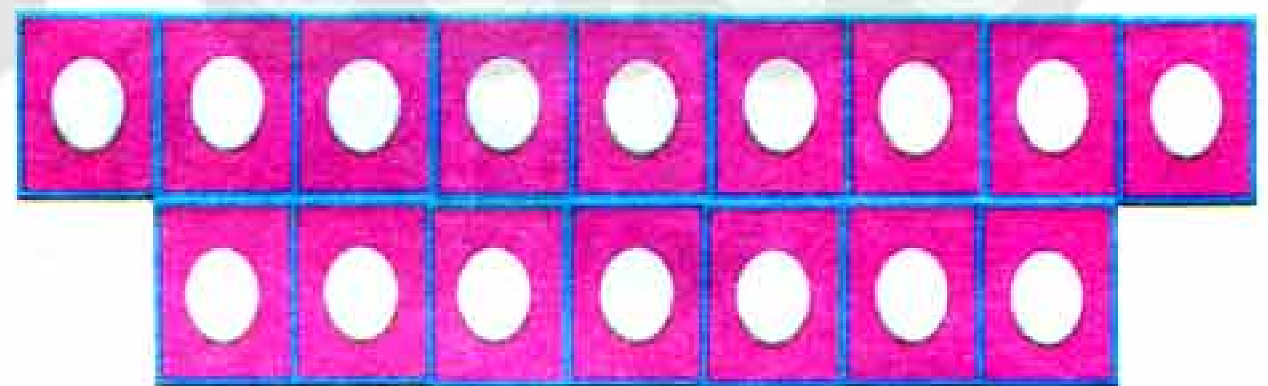
Number: ---------

(even – odd)



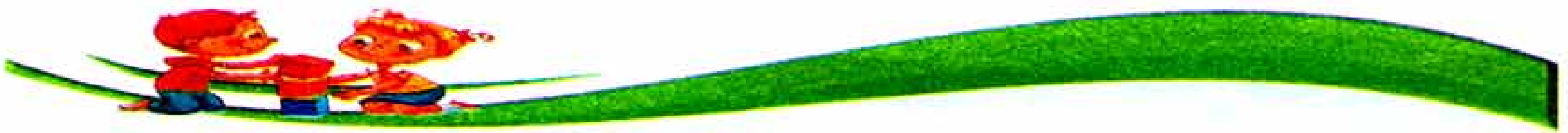
Number: ---------

(even – odd)



Number: ---------

(even – odd)



2 Circle even or odd:

4 (even – odd)

5 (even – odd)

8 (even – odd)

9 (even – odd)

11 (even – odd)

12 (even – odd)

17 (even – odd)

22 (even – odd)

3 Write even or odd:

8 (______)

6 (______)

7 (______)

10 (______)

25 (______)

5 (______)

21 (______)

16 (______)



4 **Pick out the even numbers and write them in the balloons:**

26, 12 , 25 , 14 , 11 , 33 , 18 , 100 , ٩ , 20



5 **Determine if the number is even or odd, and then record in the chart:**

Even	Odd





6 Use the numbers in the box and complete:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	98	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

a) Write all **even** numbers.

2 , 4 , 6 ....

....

....

....

b) Write all **odd** numbers. 1 , 3 , 5 ....

....

....

7 Use the numbers in the box and complete:



a) The even numbers are .... and ....

b) The odd numbers are .... and ....

c) The two numbers that you can add together to get an even number are .... and ....

d) The two numbers that you can add together to get an odd number are .... and ....



Lesson (72) Even / Odd numbers 2

Outcomes

Students will:

- Participate in Calendar Math activities.
- Describe a number as even or odd.
- Determine whether doubling a number results in an even or odd sum.

Using the chart, complete with even and odd numbers:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

Even numbers: 2, 4, ..., ..., ..., ..., ..., ..., ..., ..., ..., ..., ..., ..., ...

Odd numbers: 1, 3, ..., ..., ..., ..., ..., ..., ..., ..., ..., ..., ..., ..., ...



0 - 2 - 4 - 6 - 8

Any number has (0, 2, 4, 6 or 8) in its ones place is an even number.

Examples (10 – 12 – 14 – 16 – 18 – 20 – 22 – 24 – 26 – 28 – 30 – 32 – 34 – 36 – 38 – 40 – 42.....)



1 - 3 - 5 - 7 - 9

Any number has (1, 3, 5, 7 or 9) in its ones place is an odd number.

Examples (11 – 13 – 15 – 17 – 19 – 21 – 23 – 25 – 27 – 29 – 31 – 33 – 35)

Activities

1 Colour the shapes with even numbers in green and the odd numbers in yellow :

47 20 72 33 40

17 68

73 65 84 89

25 32 91



2 Write all the even numbers between:

a) 46 and 58: (48 , 50 , 52 , 54 , 56)

b) 83 and 93: (........ , ... , ... , ... , ...)

c) 51 and 61: (........ , ... , ... , ... , ...)

d) 29 and 39: (........ , ... , ... , ... , ...)

e) 37 and 47: (........ , ... , ... , ... , ...)

3 Write all the odd numbers between:

a) 66 and 76: (67 , 69 , 71 , 73 , 75)

b) 72 and 82: (........ , ... , ... , ... , ...)

c) 48 and 58: (........ , ... , ... , ... , ...)

d) 34 and 44: (........ , ... , ... , ... , ...)

e) 22 and 32: (........ , ... , ... , ... , ...)

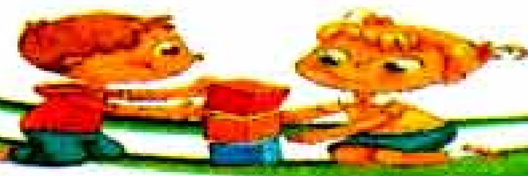
4 Write any two odd numbers between:

11 and 20: ....

52 and 60: ....

61 and 70: ....

73 and 81: ....



Note When we double even or odd number, we always get an even number.



5 Double each number and then determine if the sum is even or odd:

Number	Double	Even or Odd?
1	1 + 1 = 2	even
2	2 + 2 = 4	even
3	.... + ... = ...	....
4	.... + ... = ...	....
5	.... + ... = ...	....
6	.... + ... = ...	....
7	.... + ... = ...	....
8	.... + ... = ...	....
9	.... + ... = ...	....
10	.... + ... = ...	....

Lesson (73) Even / Odd numbers 3

Outcomes

☞ **Students will:**
- Participate in Calendar Math activities.
- Find the sum of two numbers.
- Determine whether adding an even and an odd number results in an even or odd sum.

1 When we add an even number and an even number, we will get an even number.



Example: ⚁ + ⚃ = ⚅

even + even = even

2 + 4 = 6

Complete the following table as the example:

Addition operation	Sum	Even or Odd
6 + 4	10	even
8 + 4		
8 + 2		
4 + 12		
40 + 502		
236 + 432		
532 + 234		



2 When we add an odd number and an odd number, we will get an even number.



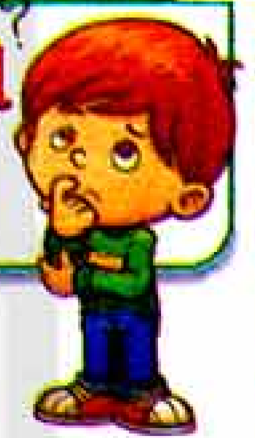
Example: odd + odd = even

3 + 5 = 8

Complete the following table:

Addition Operation	Sum	Even or Odd
3 + 9		
5 + 15		
7 + 9		

3 When we add an even number and an odd number, we will get an odd number.



Example: even + odd = odd

2 + 7 = 9

Complete the following table:

Addition Operation	Sum	Even or Odd
4 + 3		
4 + 21		
24 + 35		

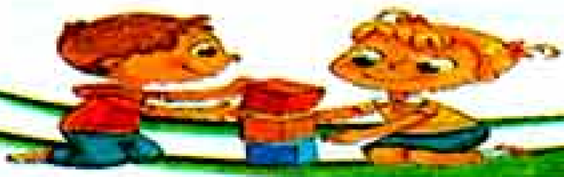
Activities

1 Without getting the sum, determine whether it is an even or odd number using the previous rule:

5+6 (even – odd)	13+5 (even – odd)	14+6 (even – odd)	25+9 (even – odd)
43+16 (even – odd)	16+23 (even – odd)	54+63 (even – odd)	77+50 (even – odd)
632+337 (even – odd)	56+112 (even – odd)	79+100 (even – odd)	50+74 (even – odd)

2 Choose the correct answer:

1. 4 + (5 or 6) is an even number.
2. 16 + (150 or 31) is an odd number.
3. 163 + (100 or 209) is an even number.
4. even + (even or odd) is an even number.



3 Answer and color according to the sum (odd / even):



3 + 9 = 12

even / odd



10 + 4 = ...

even / odd



5 + 6 = ...

even / odd



7 + 3 = ...

even / odd



11 + 12 = ...

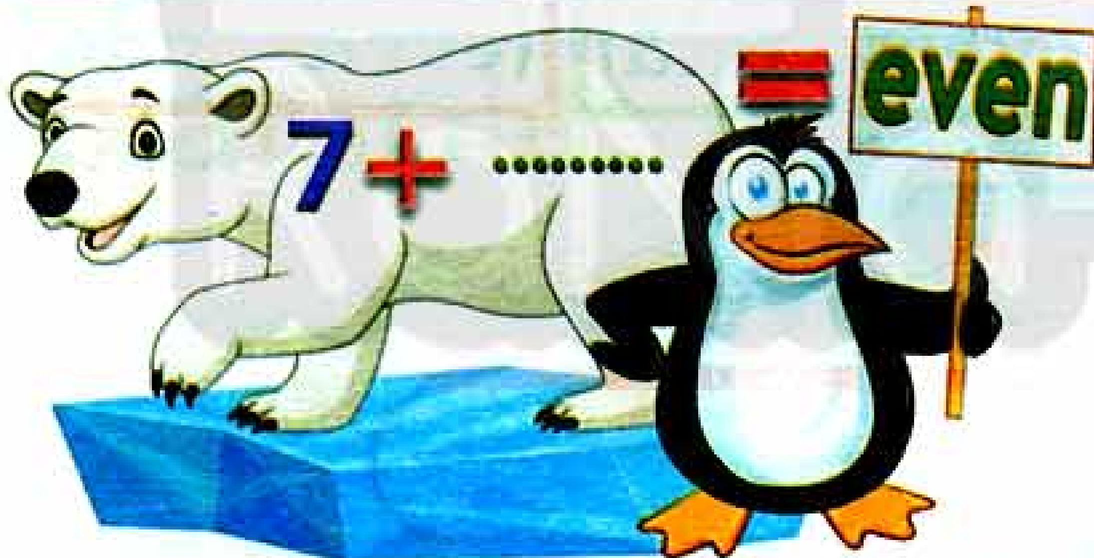
even / odd

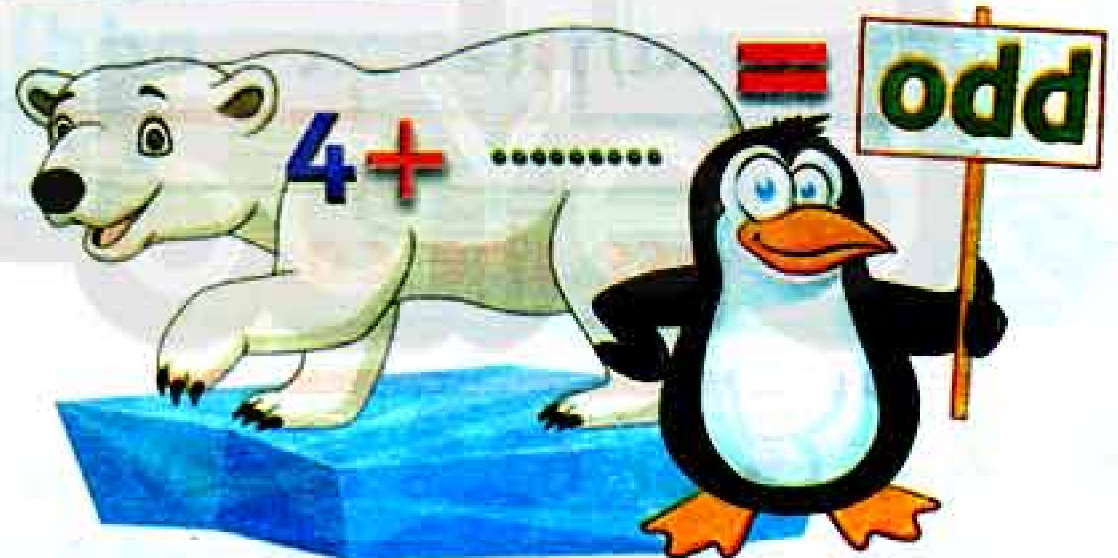


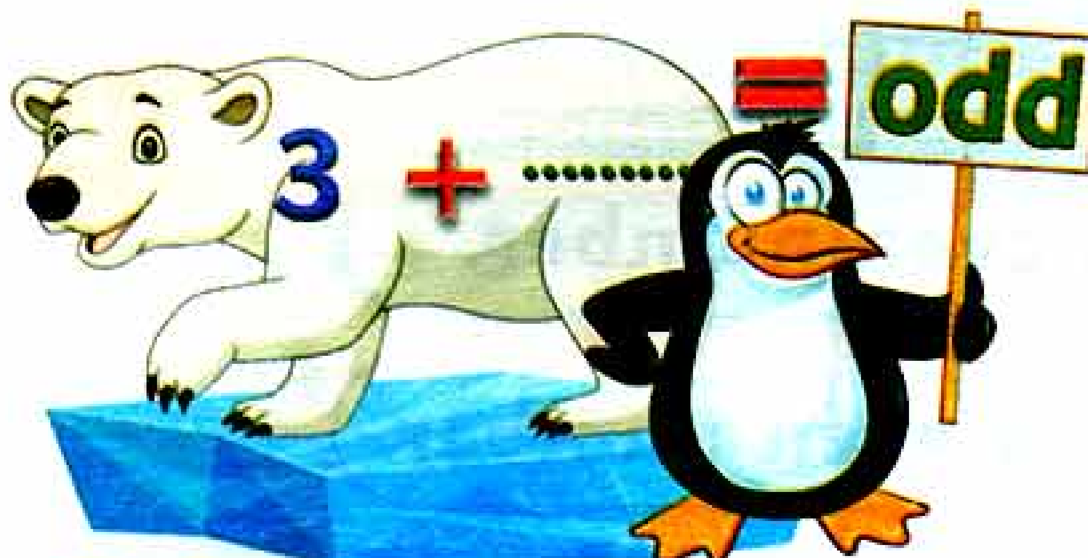
12 + 14 = ...

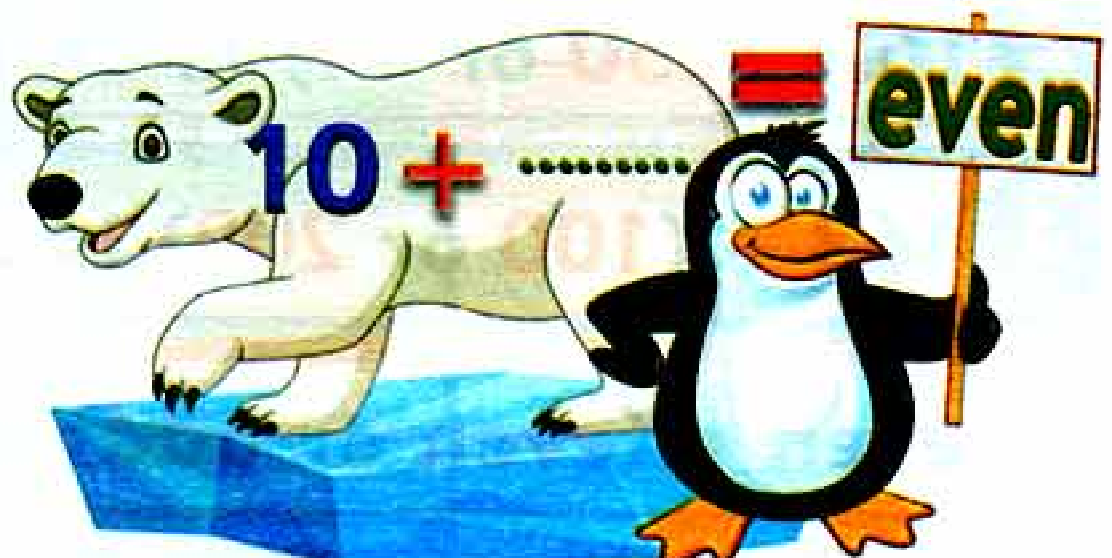
even / odd

4 Complete with a suitable number:











Lesson (74) Patterns 1

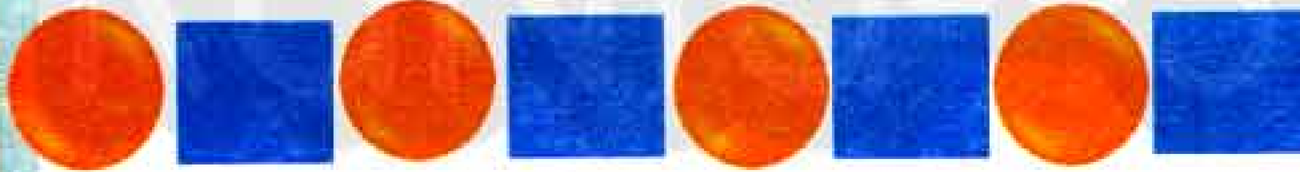
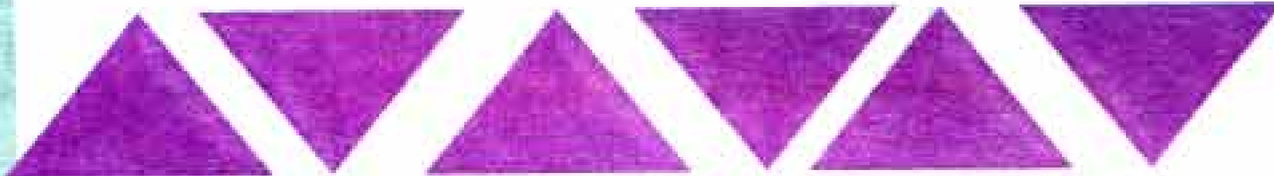
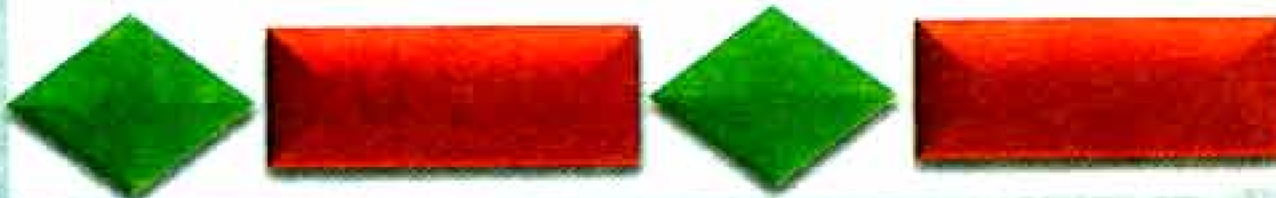
Outcomes

☞ Students will:

- Participate in Calendar Math activities.
- Identify the rule for a number pattern.
- Extend a number pattern two places.

Pattern is a sequence of shapes or numbers with a regular form according to a specific rule.

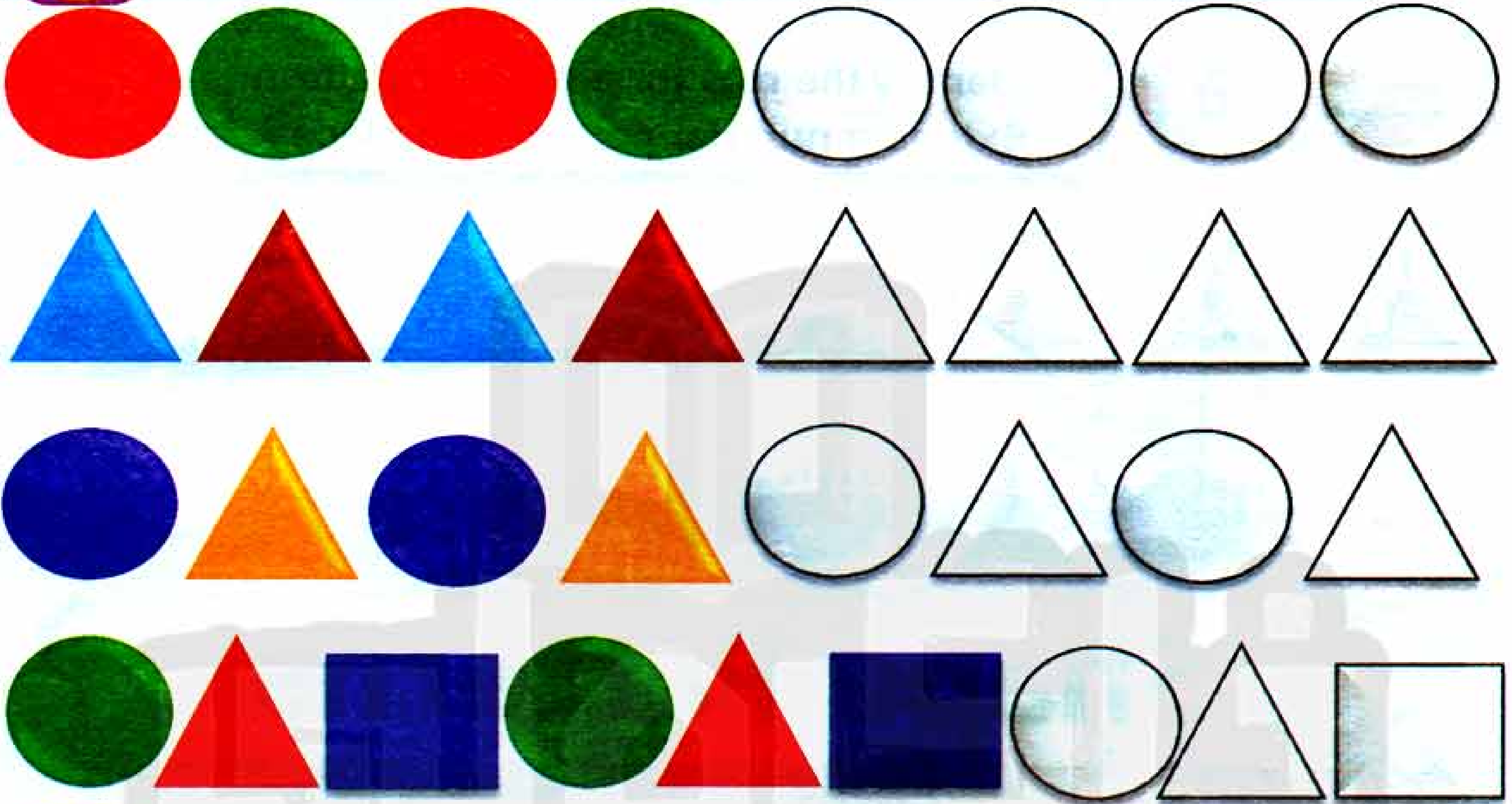
Shape Patterns

Pattern	Rule
	
	
	

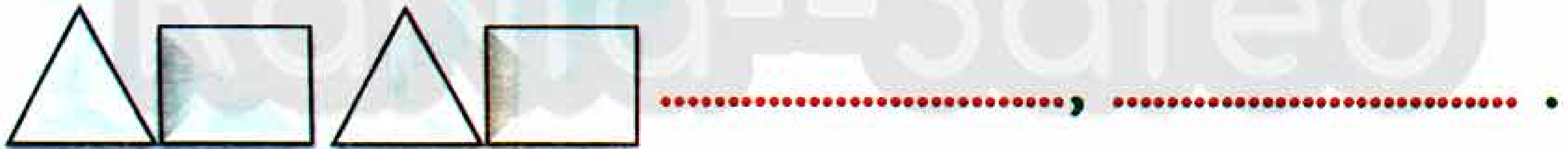


Activities

1 Colour the shapes as the same patterns:



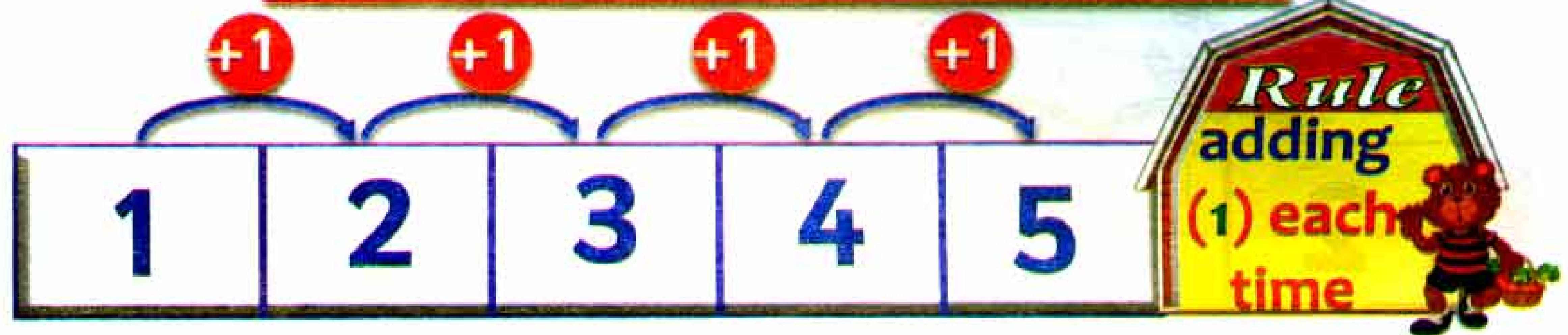
2 Complete the patterns:


.............................., ...


.............................., ...


.............................., ...

Number Patterns



1 Skip and make patterns (use 120 chart):

Skip by (2)

- 0 , 2 , 4 , ... , ... , ... , ...
- 14 , 16 , ... , ... , ... , ...
- 30 , 32 , ... , ... , ... , ...
- 56 , 58 , ... , ... , ... , ...

Skip by (5)

- 0 , 5 , 10 , ... , ... , ... , ...
- 20 , 25 , ... , ... , ... , ...
- 45 , 50 , ... , ... , ... , ...

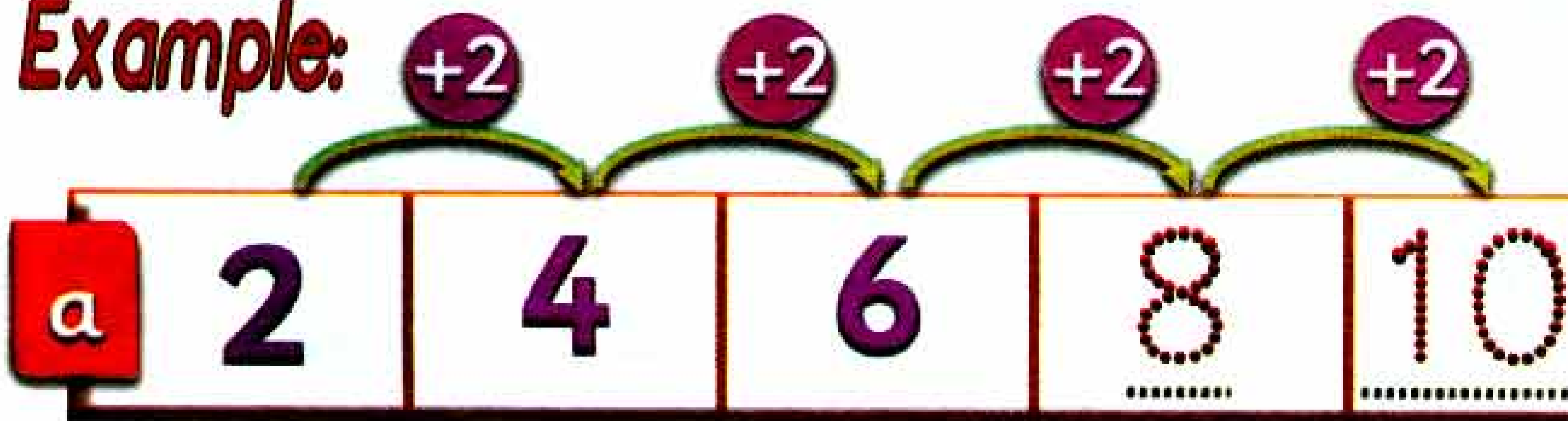
Skip by (10)

- 0 , 10 , 20 , ... , ... , ... , ...
- 100 , 110 , ... , ... , ... , ...




2 Complete the number pattern as the example:

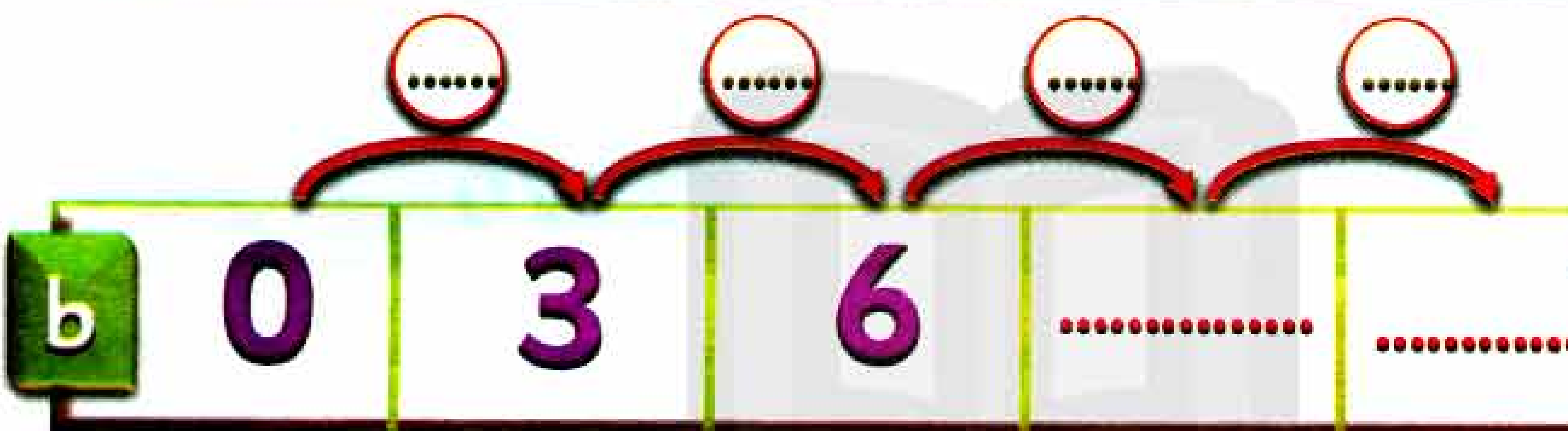
Example:



a | 2 | 4 | 6 | 8 | 10



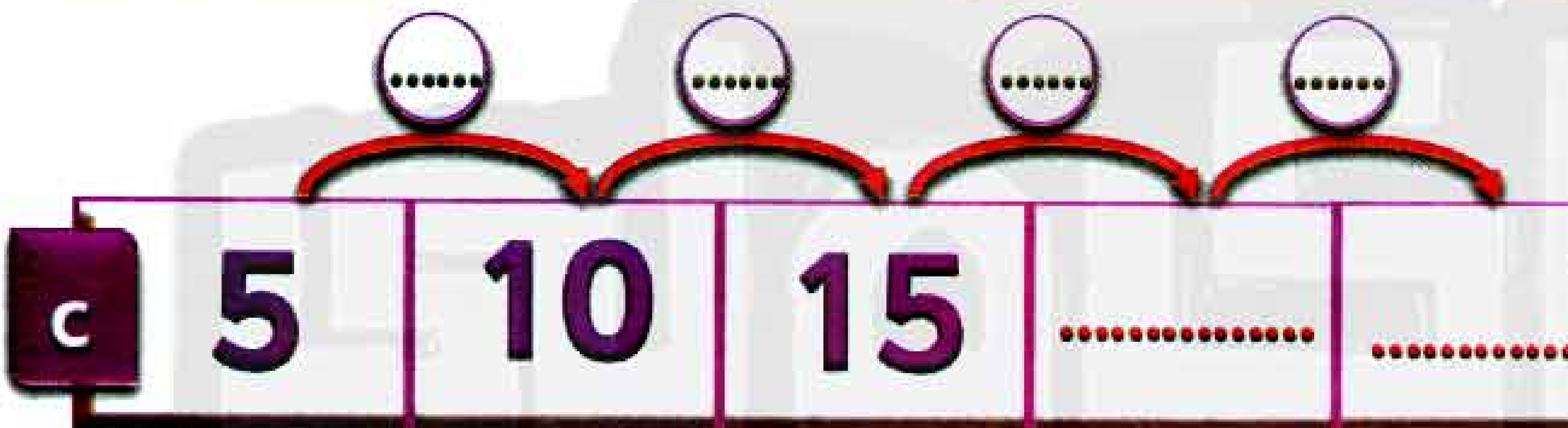
Rule: adding (2) each time



b | 0 | 3 | 6 | .... | ....



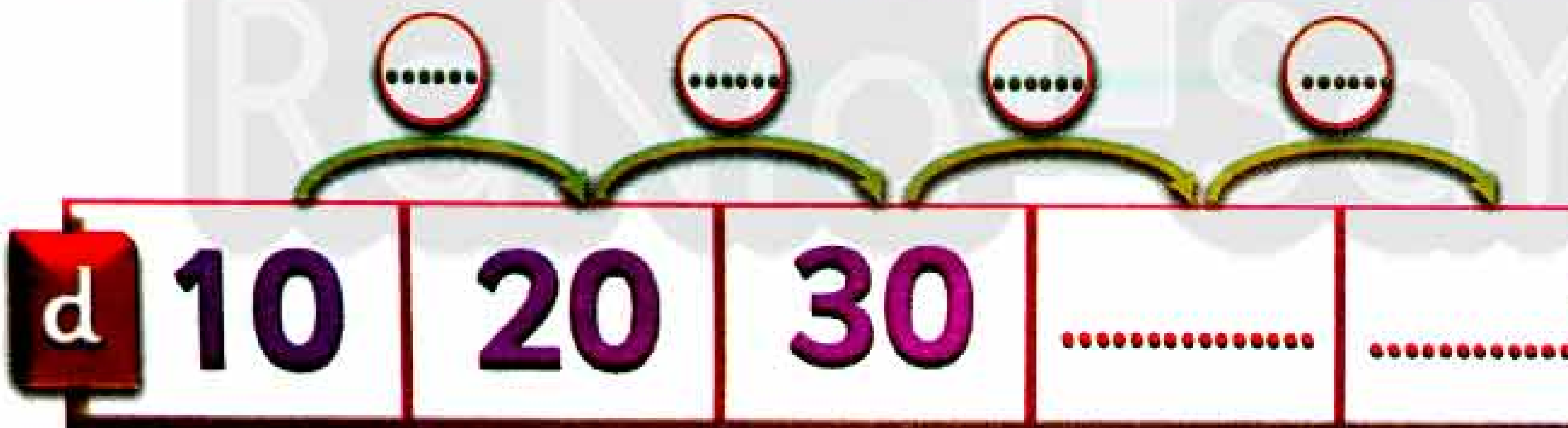
Rule: adding (3) each time



c | 5 | 10 | 15 | .... | ....



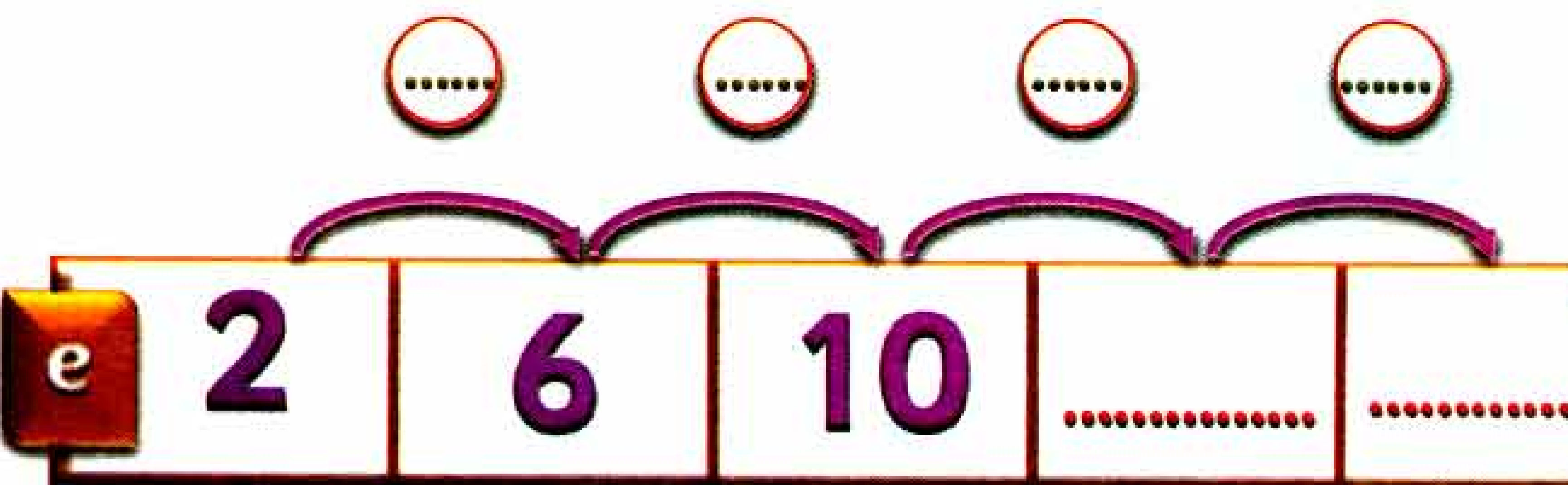
Rule: adding ... each time



d | 10 | 20 | 30 | .... | ....



Rule: adding ... each time



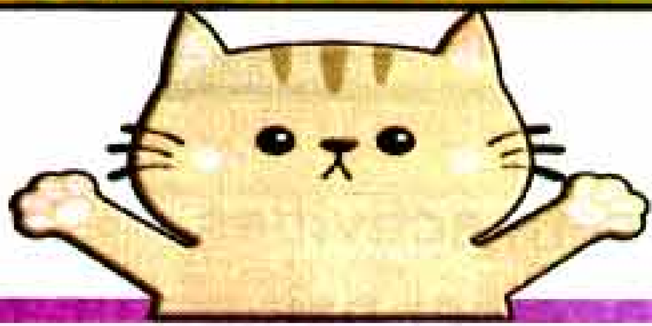
e | 2 | 6 | 10 | .... | ....



Rule: adding ... each time

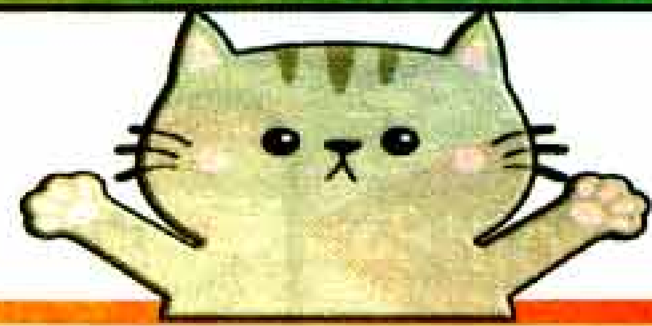


3 Choose the suitable number to complete the pattern as the example:



2, 4, 6, ...

● 8 ○ 15 ○ 3



10, 20, 30, ...

○ 50 ○ 40 ○ 5



13, 15, 17, ...

○ 90 ○ 19 ○ 9



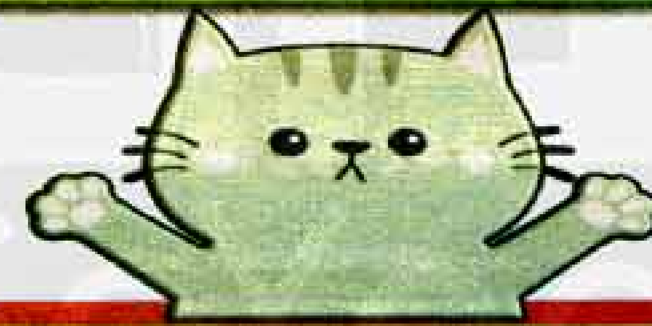
12, 14, 16, ...

○ 13 ○ 15 ○ 18



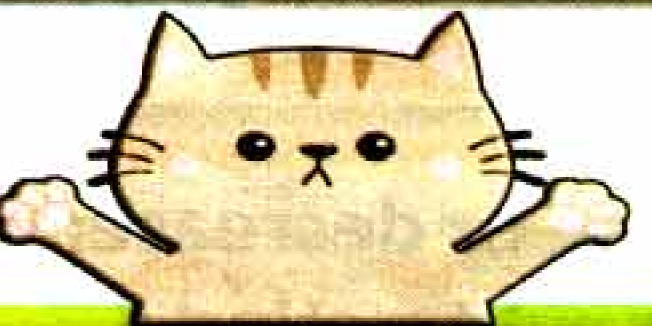
3, 6, 9, ...

○ 12 ○ 5 ○ 3



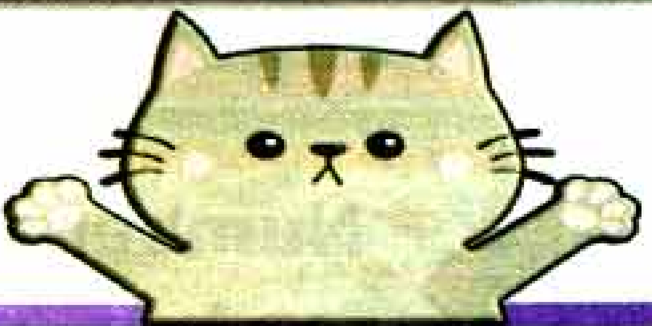
4, 8, 12, ...

○ 14 ○ 15 ○ 16



5, 10, 15, ...

○ 20 ○ 16 ○ 50



6, 12, 18, ...

○ 8 ○ 24 ○ 19

Lesson (75) Patterns 2

Outcomes

☞ Students will:

- Participate in Calendar Math activities.
- Apply a rule to create a number pattern up to five places.
- Add or subtract to extend a pattern.

Increasing pattern

Notice



1 , 2 , 3 , 4 , ... , ... , ...

The numbers in this pattern are getting bigger or increasing by (1)

The rule is: (to add 1 each time).

Decreasing pattern

12 , 10 , 8 , 6 , ... , ... , ...

The numbers in this pattern are getting smaller or decreasing by (2).

The rule is: (to subtract 2 each time).

Learn

☞ Number pattern can increase or decrease; we can have rules by adding or subtracting a certain amount each time.

☞ Sometimes rules can include adding and subtracting.

Activities

1 Complete the number patterns:

a

+3	+3	......	......	......

3	6	9	....	....	....

Rule: adding (3) each time

b

......	......	......	......	......

50	55	60	....	....	....

Rule: adding (5) each time

c

......	......	......	......	......

90	80	70	....	....	....

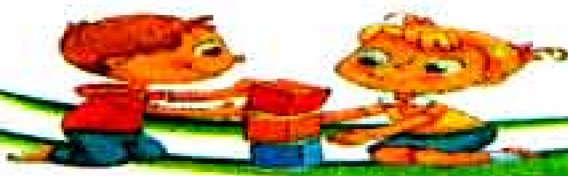
Rule: subtracting ... each time

d

......	......	......	......	......

85	75	65	....	....	....

Rule: subtracting ... each time



2 Complete the following patterns:

a 3, 5, 7, 9, ..., ... Rule is (+2).

b 17, 20, 23, 26, ..., ... Rule is ....

c 73, 70, 67, 64, ..., ... Rule is ....

d 95, 85, 75, 65, ..., ... Rule is ....

e 46, 42, 38, 34, ..., ... Rule is ....

f 66, 70, 74, 78, ..., ... Rule is ....

g 8, 16, 24, 32, ..., ... Rule is ....

3 Complete the following patterns:

a 12, 10, 8, ..., ..., ... Rule is (-2).

b 30, 25, 20, ..., ..., ... Rule is ....

c 18, 15, 12, ..., ..., ... Rule is ....

d 36, 30, 24, ..., ..., ... Rule is ....

e 75, 80, 85, ..., ..., ... Rule is ....

Lesson (76) Patterns 3

Outcomes

Students will:

- Participate in Calendar Math activities.
- Match a rule to a number pattern.
- Extend number patterns using a given rule.
- Create a pattern rule and matching number pattern.

Activities

1 Circle the correct answer for each pattern:

a 5, 7, 9, 11, 13, 15 (increasing - decreasing)

b 7, 11, 15, 19, 23 (increasing - decreasing)

c 90, 85, 80, 75, 70 (increasing - decreasing)

d 18, 15, 12, 9, 6, 3 (increasing - decreasing)

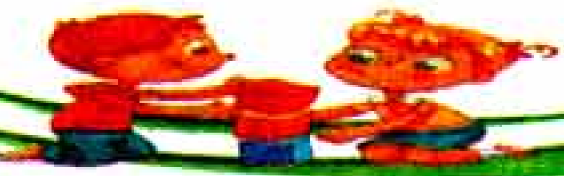
2 Circle the correct answer for each pattern:

a 5, 10, 15, 20, 25 (addition - subtraction)

b 73, 70, 67, 64, 61 (addition - subtraction)

c 59, 51, 43, 35, 27 (addition - subtraction)

d 15, 25, 35, 45, 55 (addition - subtraction)



3 Match the rule to its pattern:

Pattern	Rule
3, 6, 9, 12, 15, 18	- 5
5, 10, 15, 20, 25	+ 10
10, 20, 30, 40, 50	+ 3
95, 90, 85, 80, 75	+ 4
59, 52, 45, 38, 31	+ 5
26, 30, 34, 38, 42	- 6
46, 40, 34, 28, 22	- 7

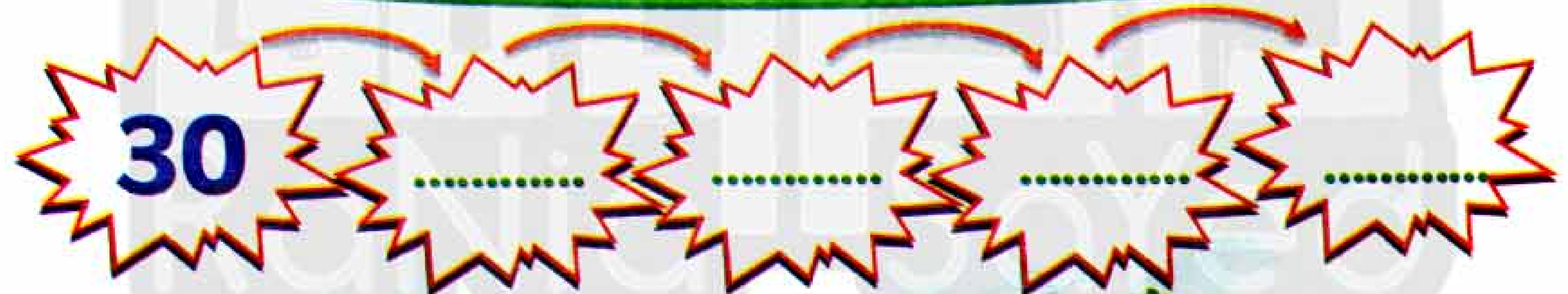


4 Use the rule to complete the pattern:













Lesson (77) Patterns 4

Outcomes

Students will:
- Participate in Calendar Math activities.
- Identify the rule in a number pattern.
- Create addition and subtraction pattern rules.
- Extend number patterns to five places using a given rule.

Note



In this pattern:
- First, we observe that numbers increased.
- Second, we observe that numbers decreased.



- Pattern can have more than one rule.
- In the previous pattern:
  - The first rule is (+ 4).
  - The second rule is (- 2).



Activities

1 Complete the pattern as the example

a Rule is: + 3, - 2

+3	-2	+3	-2	
30	33	31	34	32

b Rule is: ....

-5	+10	-5	+10	
35	30	40	....	....

c Rule is: ....

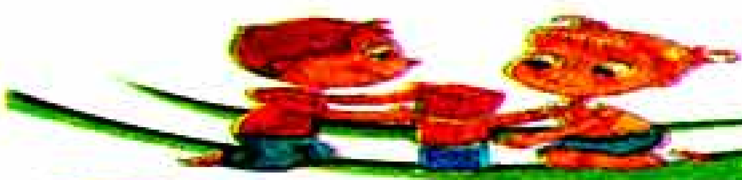
-4	+5	-4	+5	
44	40	45	....	....

d Rule is: ....

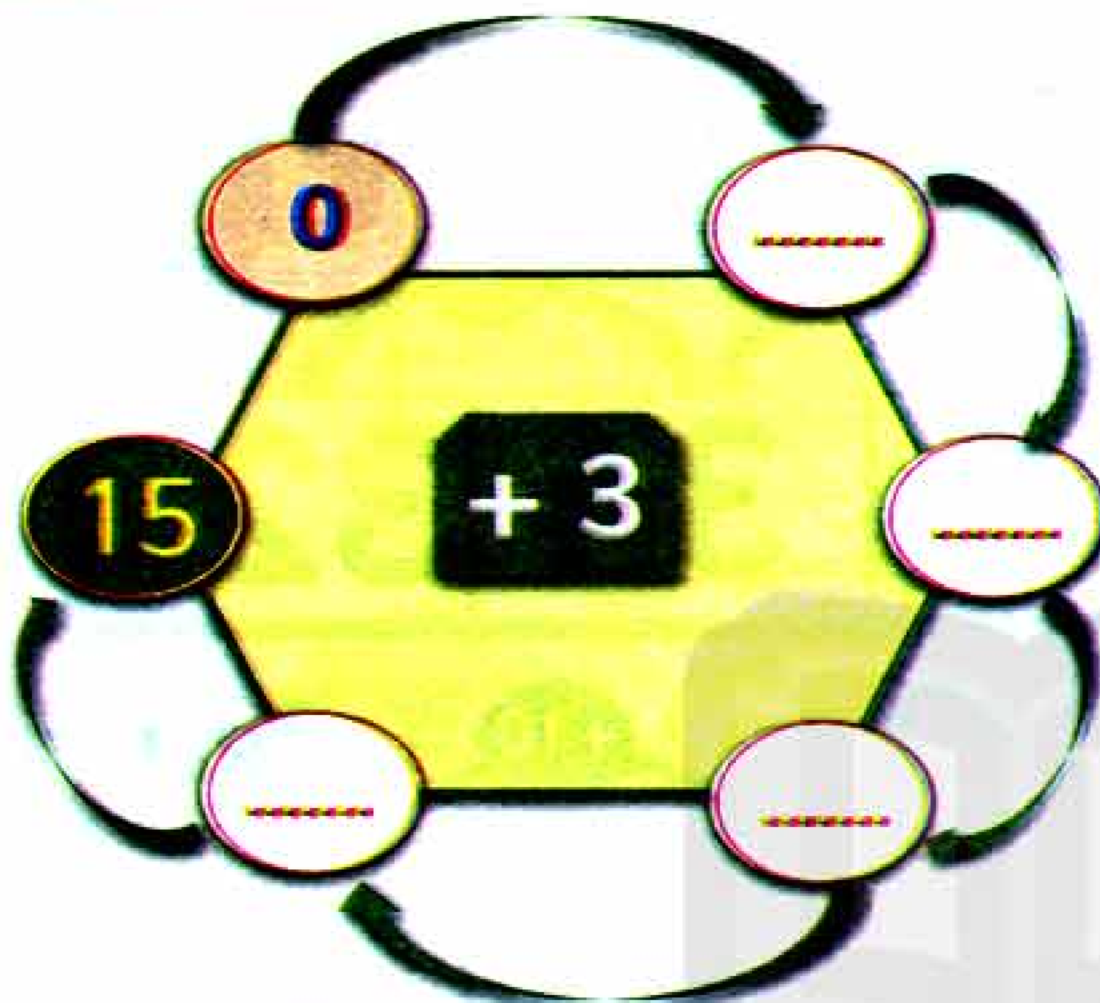
+9	-6	+9	-6	
60	69	63	....	....

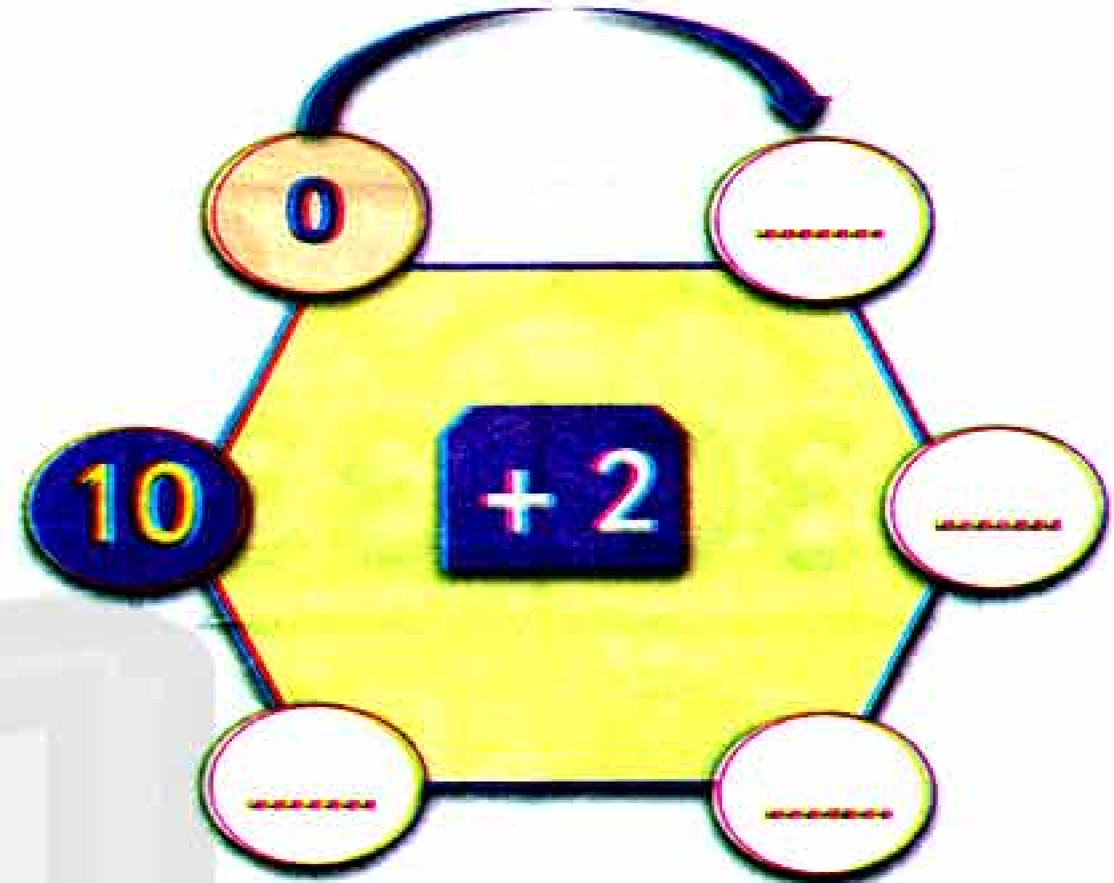
e Rule is: ....

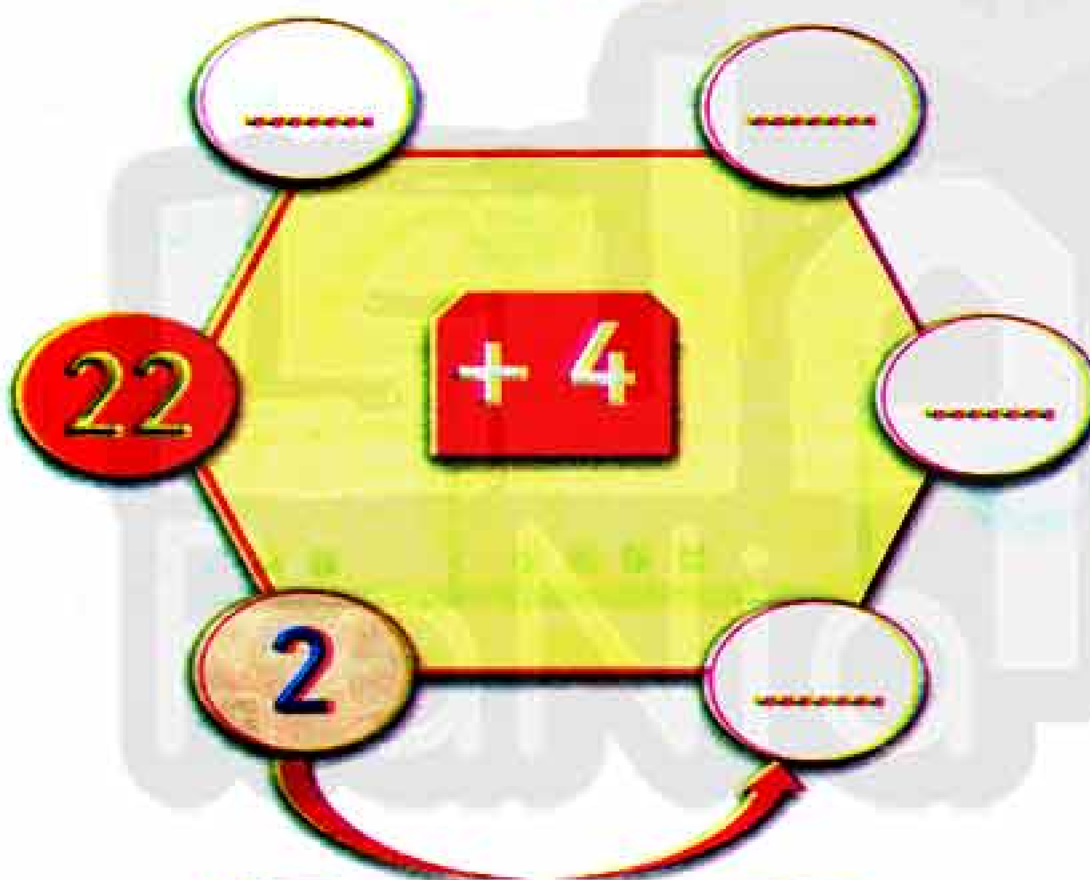
-5	+7	...	...	
55	50	57	....	....

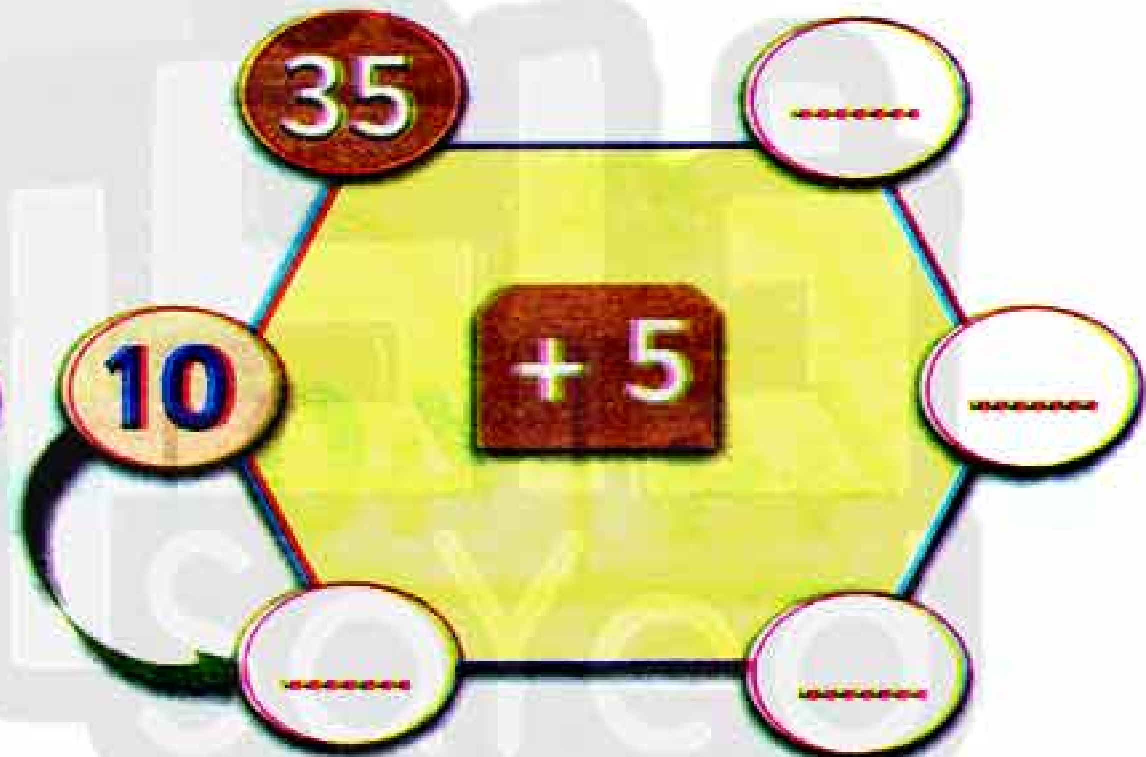


2 Follow the rule and complete:















3 Use the given rule to finish the number pattern:

a) Rule: (+ 5, - 1)



b) Rule: (+ 4, - 3)

25, ..., ..., ..., ...

c) Rule: (+ 2, - 5)

70, ..., ..., ..., ...

d) Rule: (- 3, + 7)

53, ..., ..., ..., ...

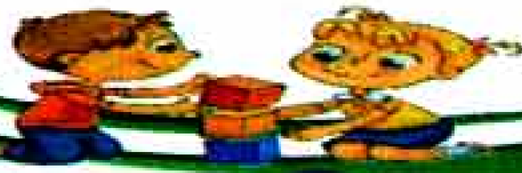
e) Rule: (+ 5, - 10)

90, ..., ..., ..., ...



f) Rule: (- 7, + 4)

87, ..., ..., ..., ...



Lesson (78) Arrays 1

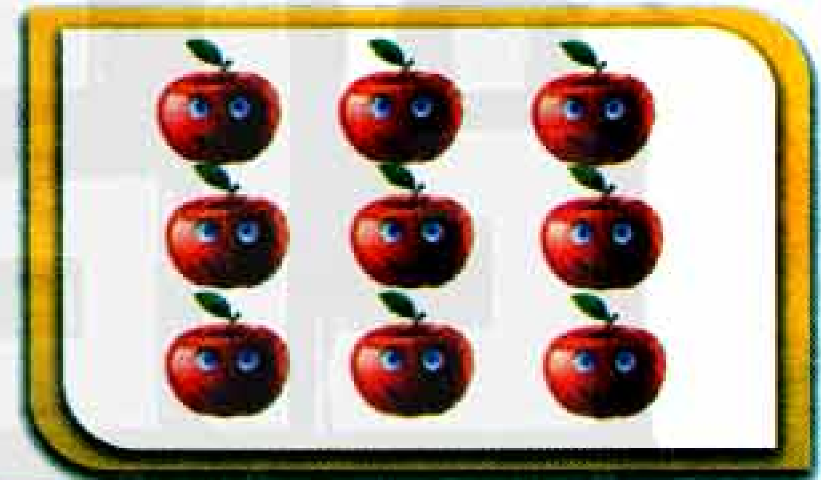
Outcomes

Students will:

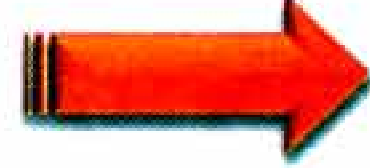
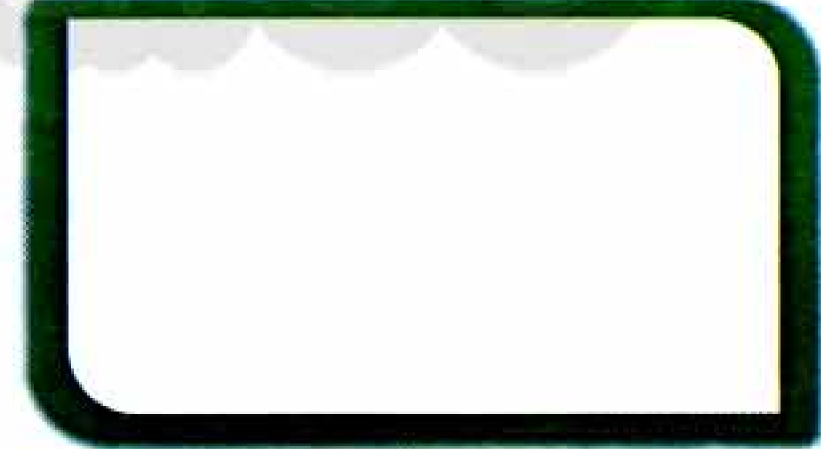
- Participate in Calendar Math activities.
- Define array.
- Identify arrays and non-arrays.
- Create an array.

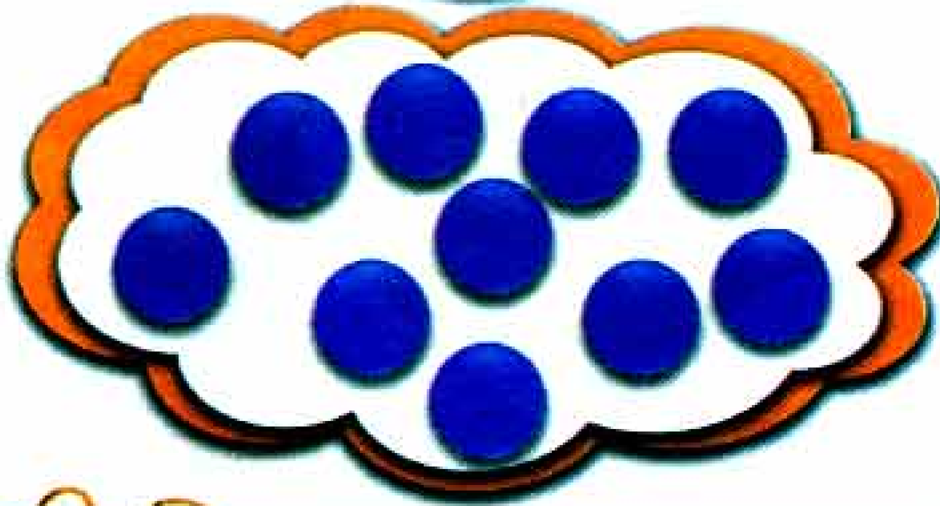
We can arrange things and put them in a pattern called "array" as the following.





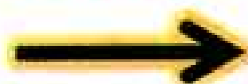
Arrange as the previous example:









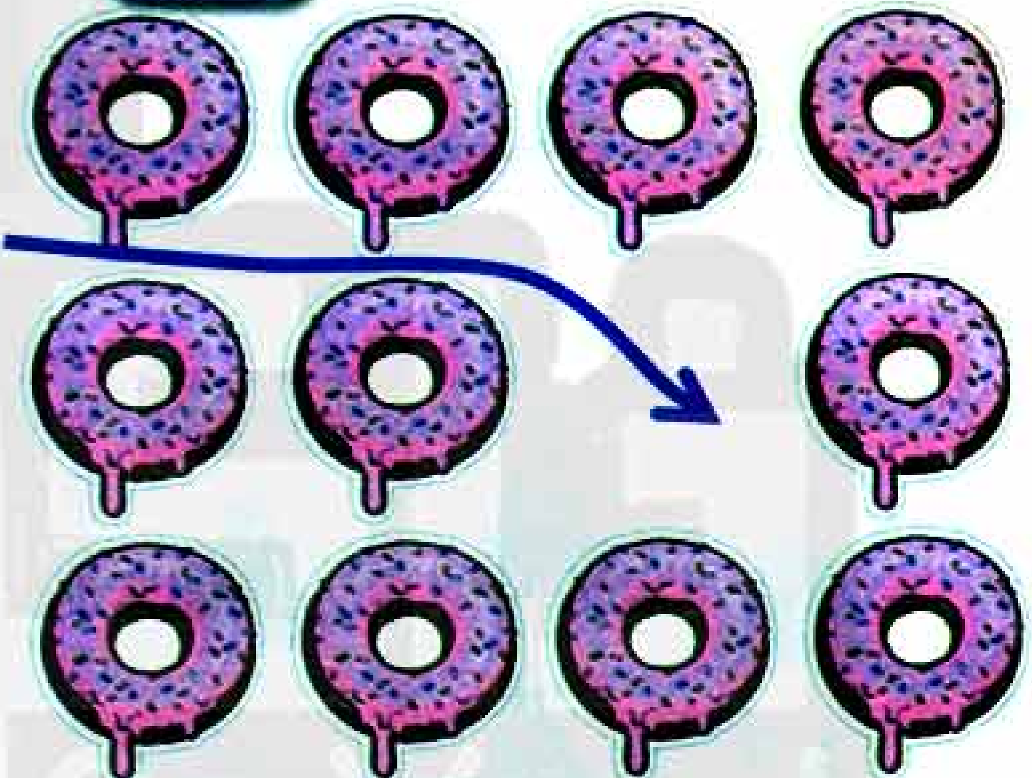
Array

An array is a set that shows equal groups in rows and columns with no gaps.



Non-array

A non-array is a group arranged with a gap. Columns and rows are not perfect.



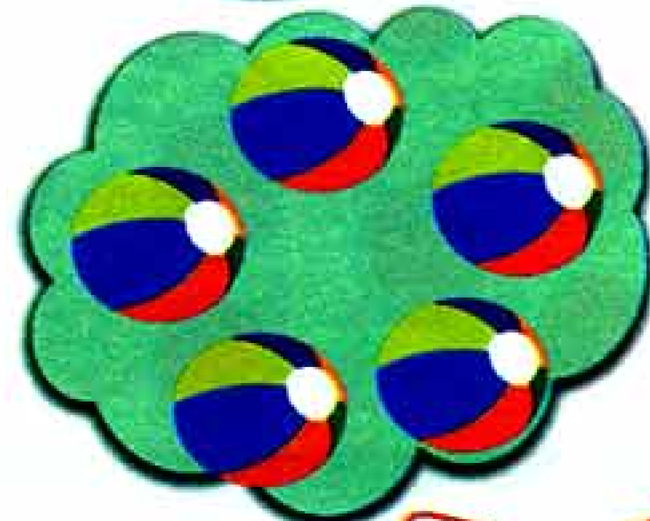
☞ Circle the pictures that show an array:



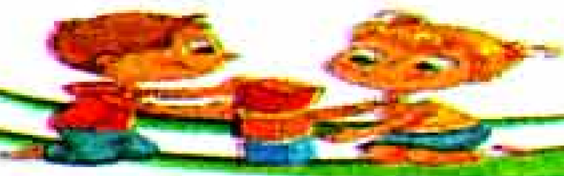








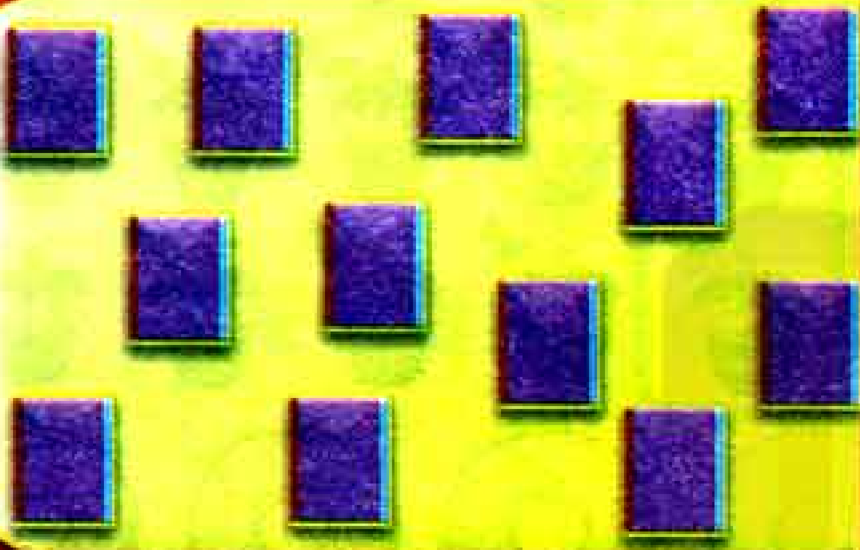




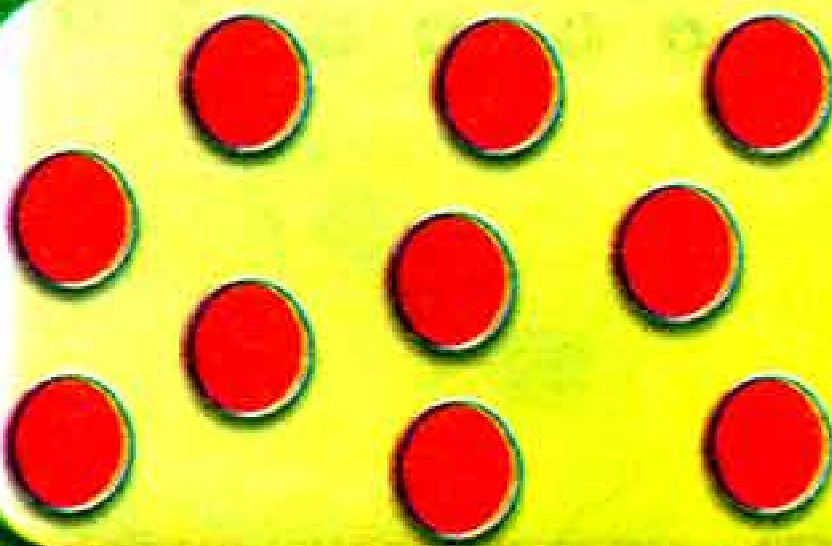
Activities



Arrange each group in a suitable array:







Lesson (79) Arrays 2

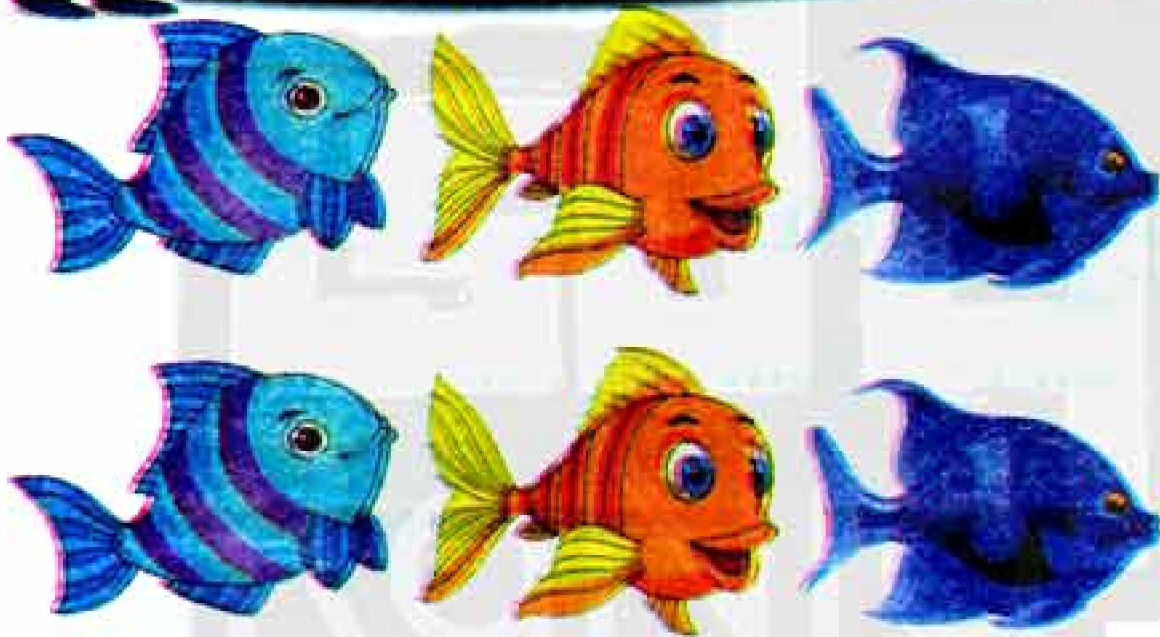
Outcomes

Students will:

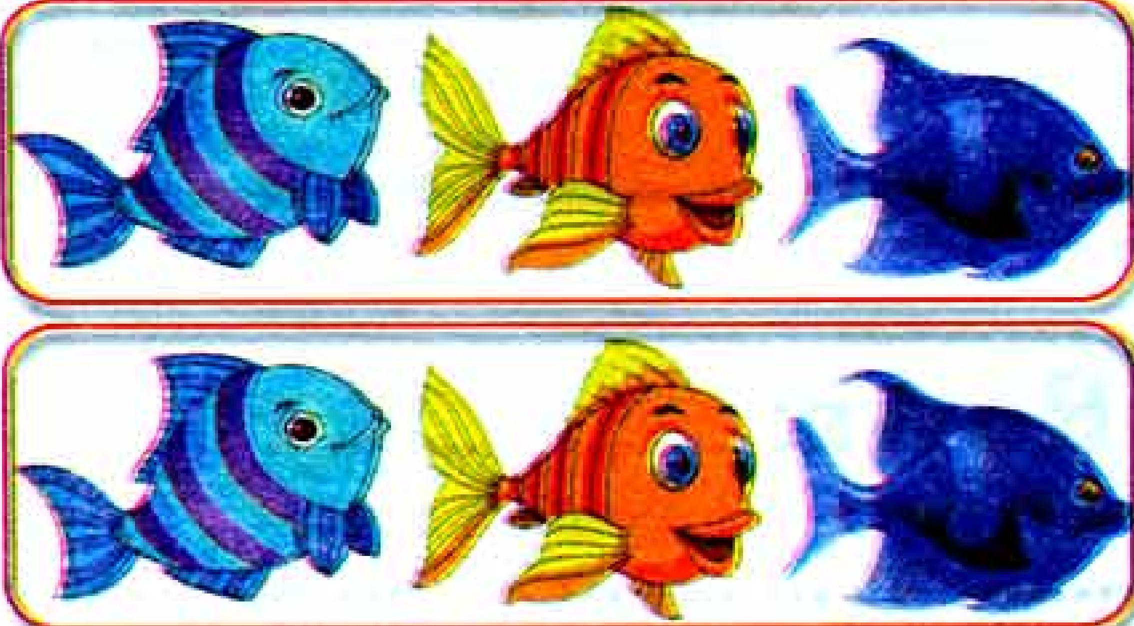
- Participate in Calendar Math activities.
- Use repeated addition to find the total number of objects in arrays.
- Write addition equations to express the total number of objects in an array.

Finding the total of things in an array

There are three ways:



1 We count each one. We get 6

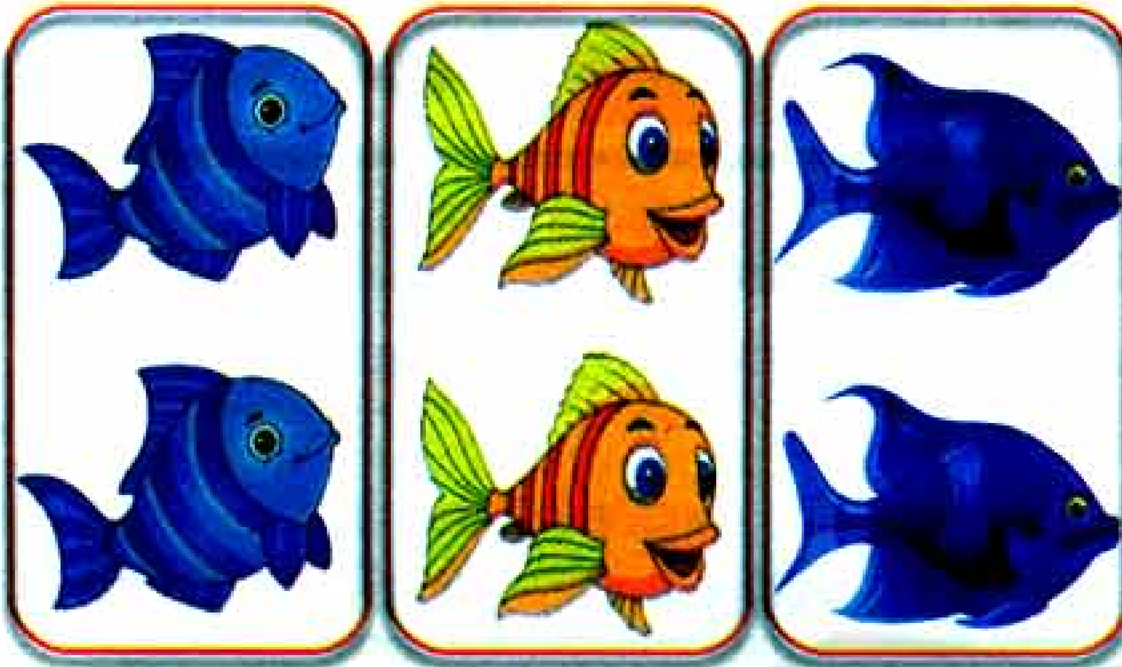


2 We find the total in each row, then we use repeated addition.

$3 + 3 = 6$







We find the total in each column, then we use repeated addition.

2 + 2 + 2 = 6



Repeated addition means adding a number more than once.

1 Find the total:



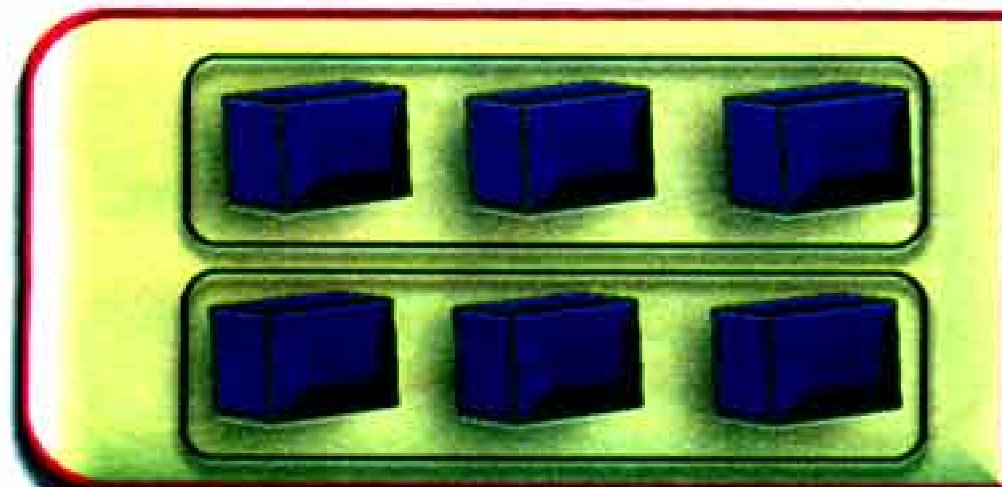
Columns: ....

...... + ... + ... = ...



Columns: ....

...... + ... + ... + ... = ...

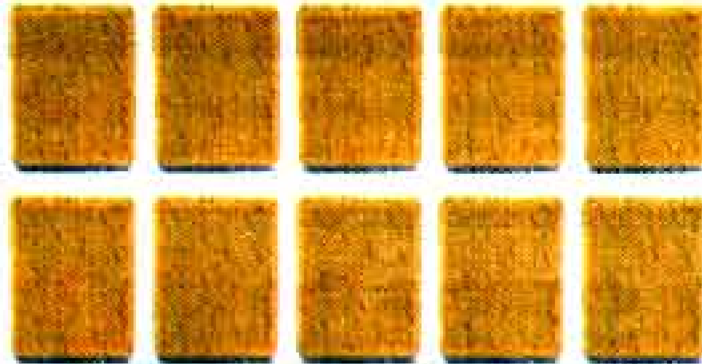


Rows: ....

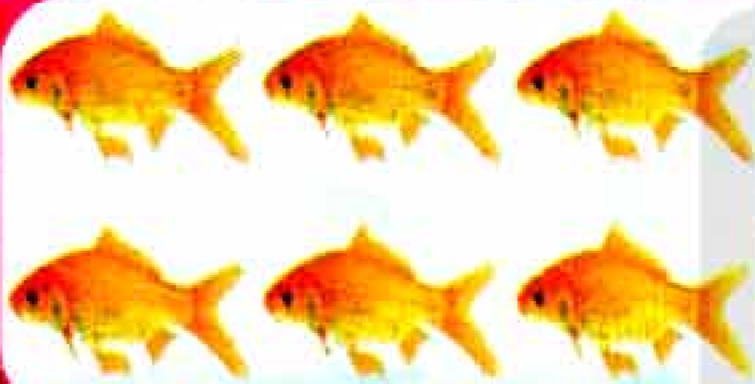
.... + ... = ...



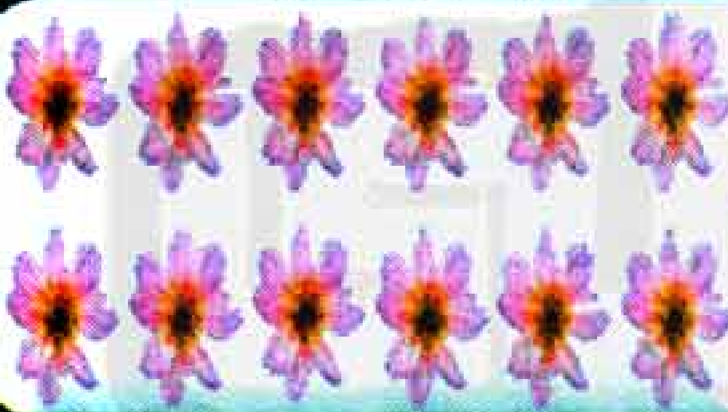
2 Count the rows and write the addition equation as the example:



Rows: 2 (5 + 5 = 10)
Columns: 5 (2+2+2+2+2= 10)



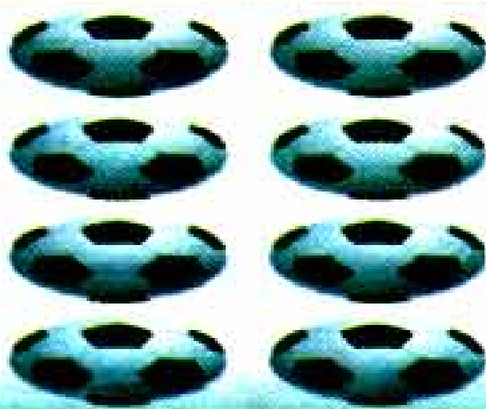
Rows: ....
Columns: ....



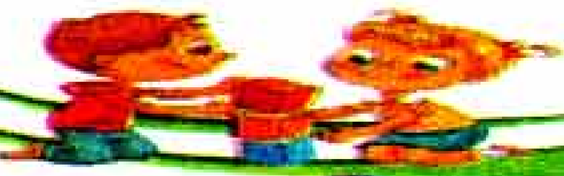
Rows: ....
Columns: ....



Rows: ....
Columns: ....



Rows: ....
Columns: ....

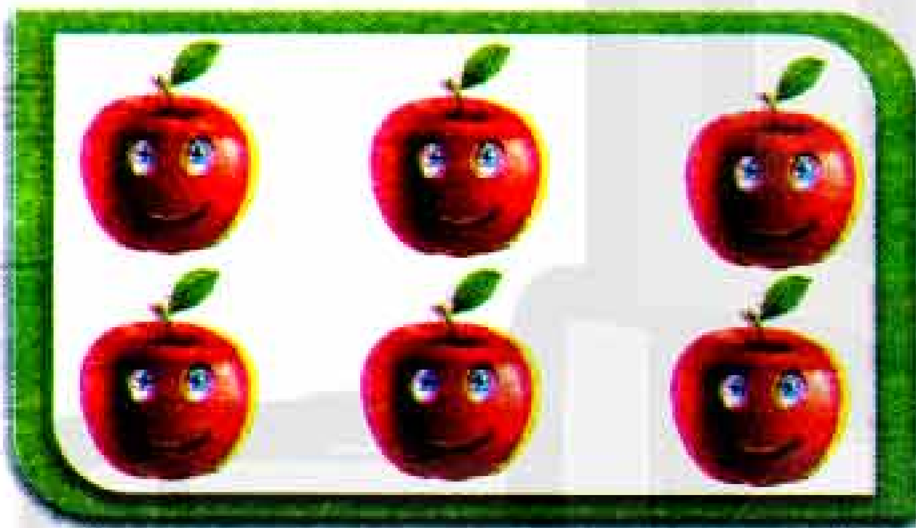


Lesson (80) Arrays 3

Outcomes

☞ **Students will:**

- Participate in Calendar Math activities.
- Write addition equations to express the total number of objects in arrays.
- Design an array using repeated addition.



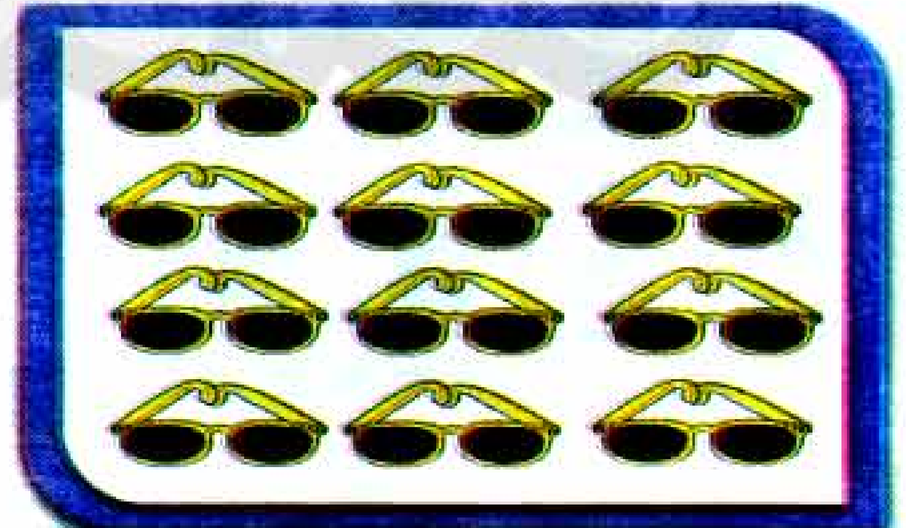
Rows: 2
Columns: 3
This is a 2 by 3 array



Rows: 3
Columns: 2
This is a 3 by 2 array



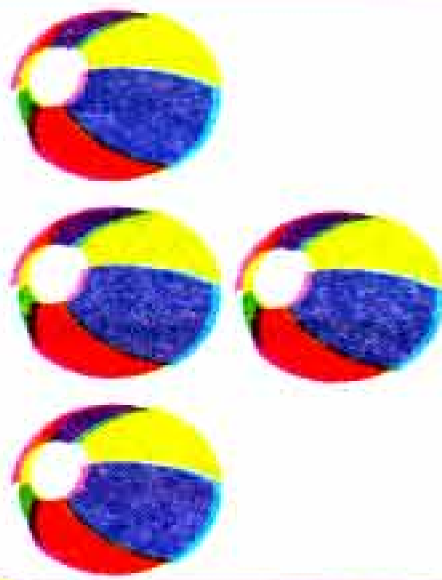
Rows: ....
Columns: ....
This is a ..... by ..... array



Rows: ....
Columns: ....
This is a ..... by ..... array

Activities

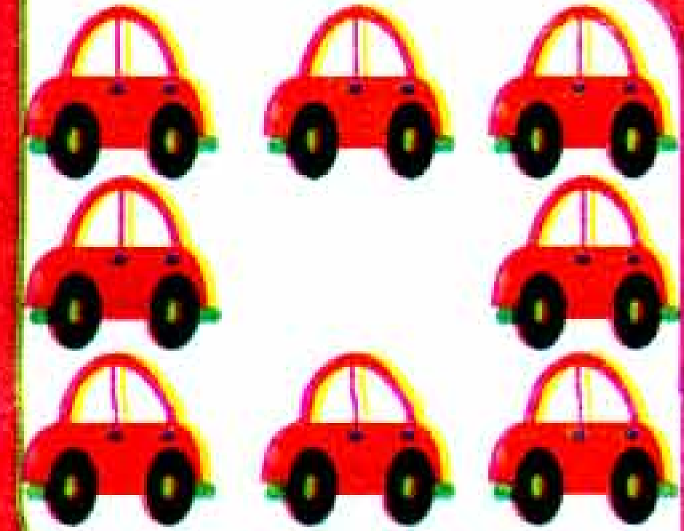
1 Complete the array then write its name:



.... by ......



.... by ......



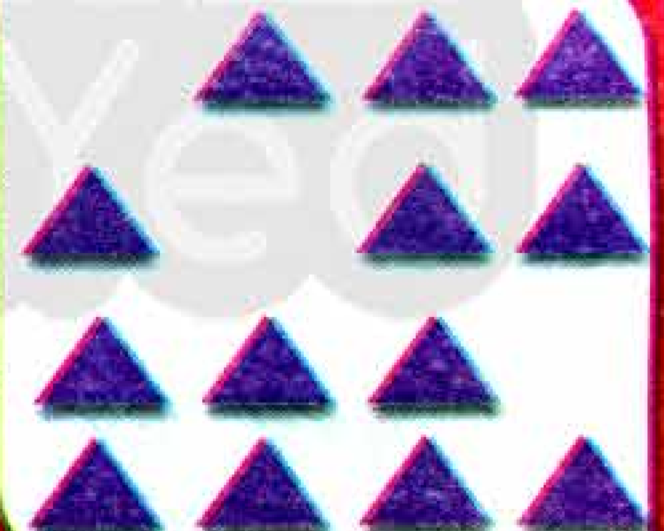
.... by ......



.... by ......



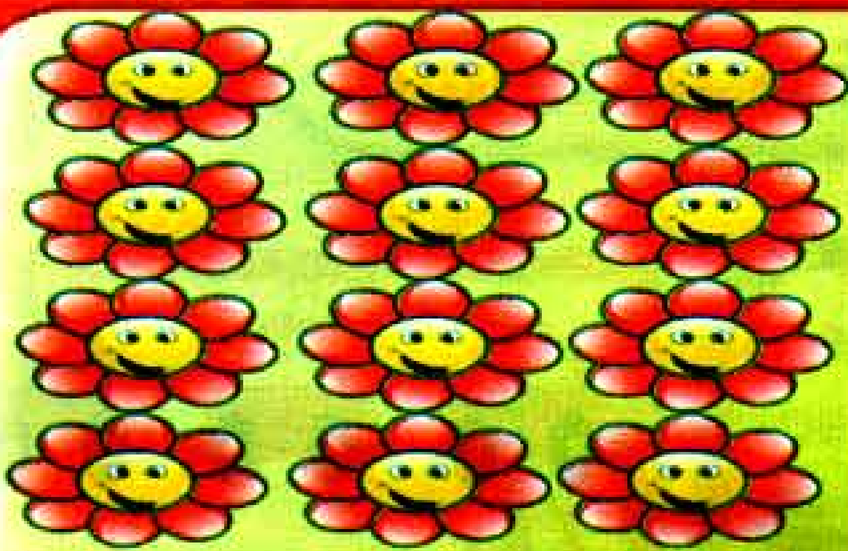
.... by ......



.... by ......



2 Look at the arrays then write the equation:



Rows: 4 , Columns: 3

3 + 3 + 3 + 3 = ...

4 + 4 + 4 = ...

This is a .... by .... array.



Rows: ...... , Columns: ......

...... + ... + ... + ... = ...

...... + ... + = ...

This is a .... by .... array.



Rows: ...... , Columns: ......

...... + ... + ... + ... + 4 = ...

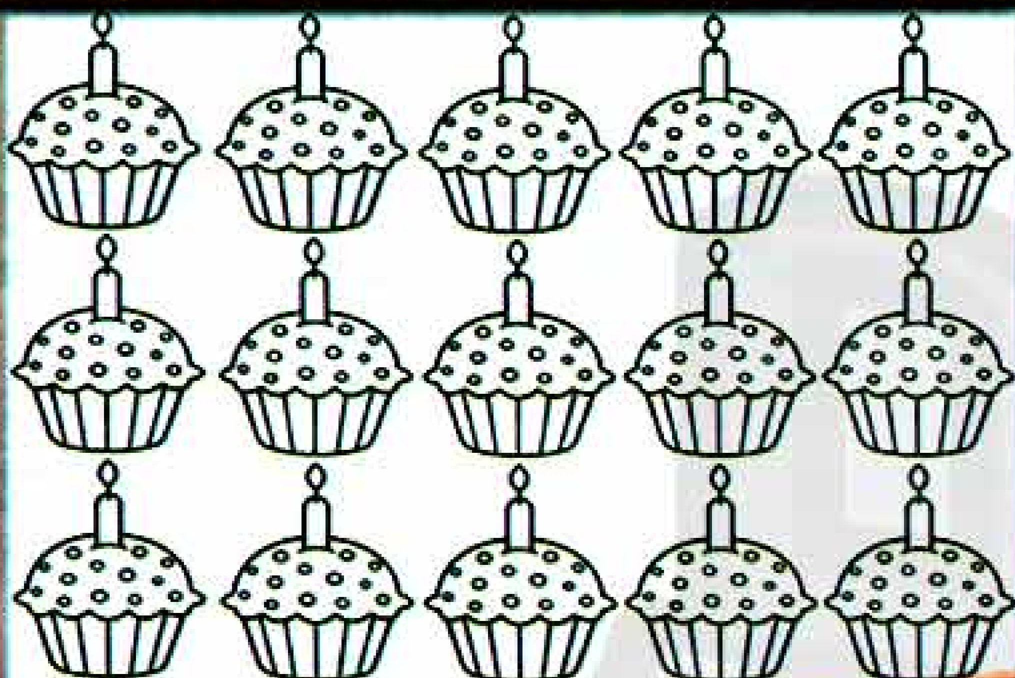
...... + ... + ... + ... = ...

This is a .... by .... array.



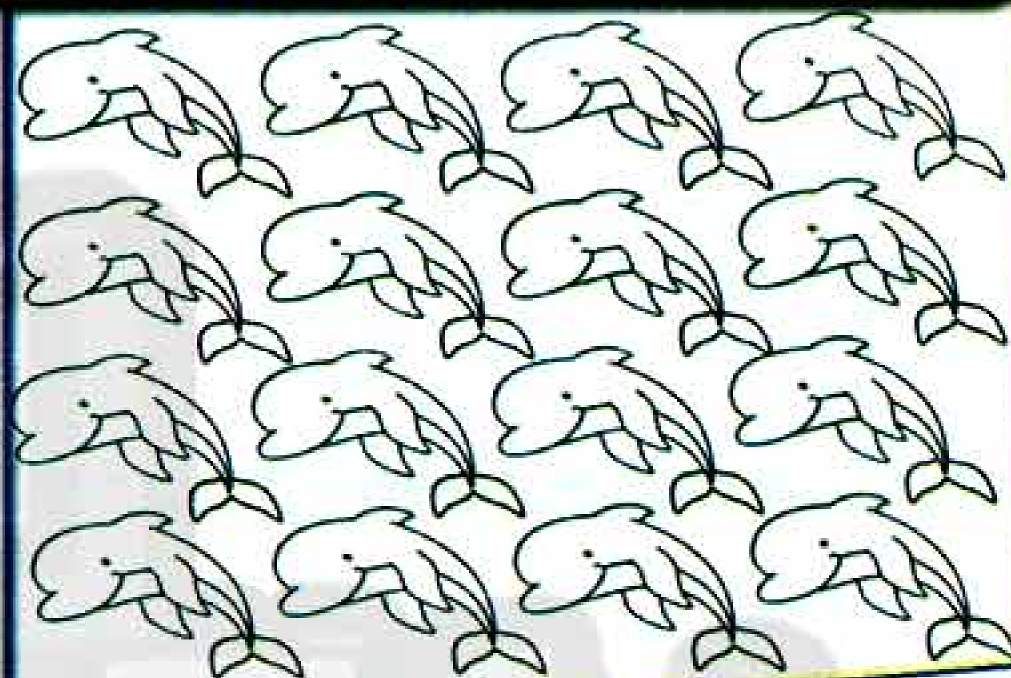
3 Colour the rows and columns, then write the array equation:

rows = 2
columns = 3



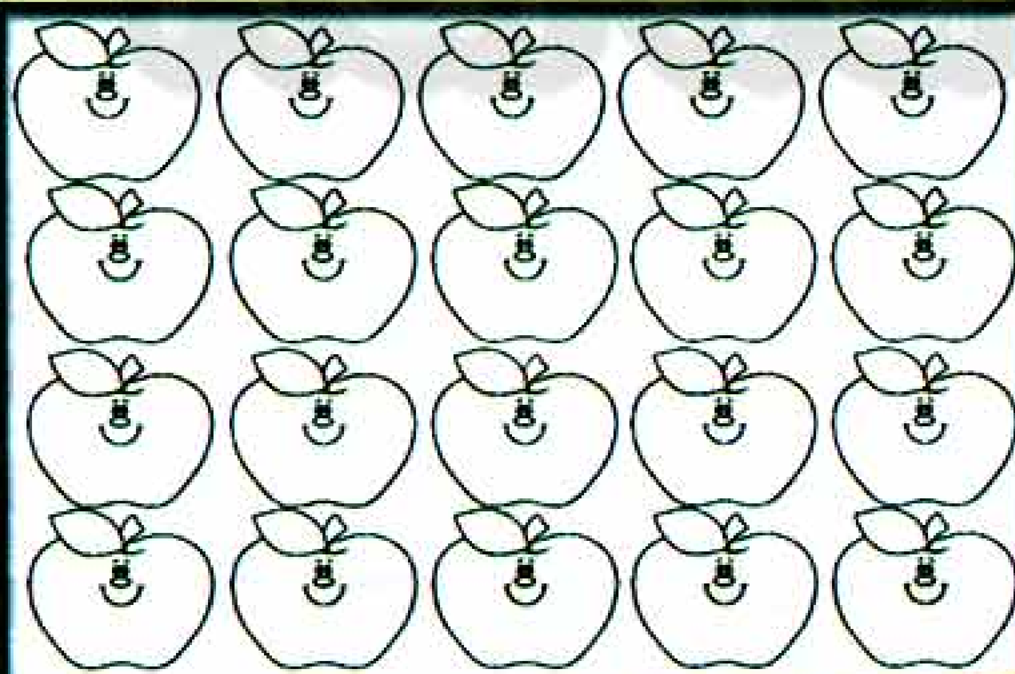
This is a ...... by ..... array.

rows = 4
columns = 3



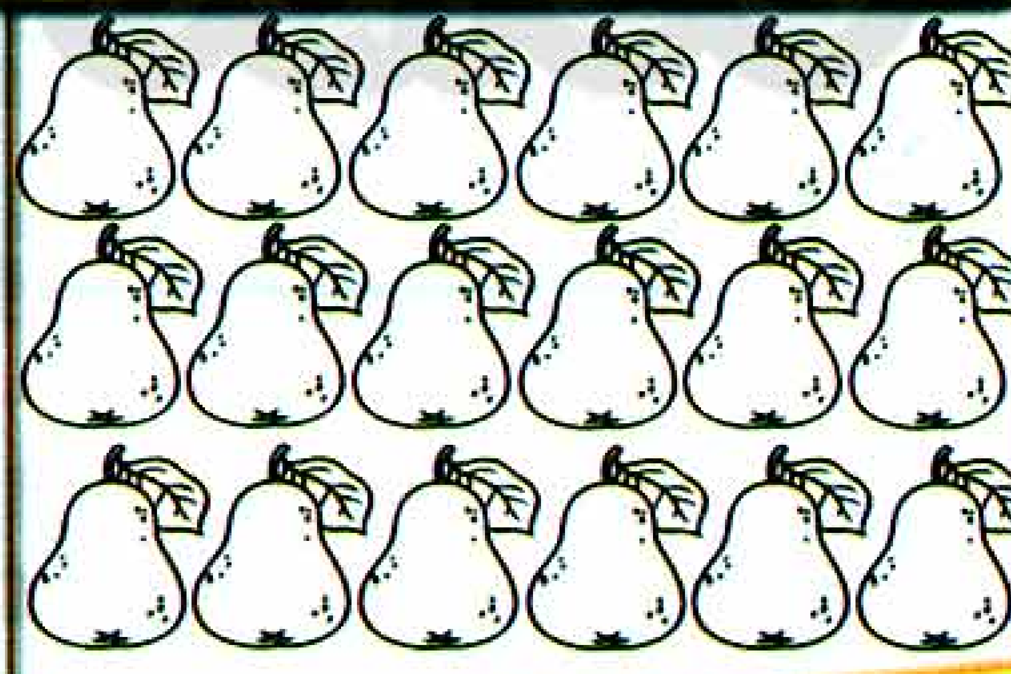
This is a ...... by ..... array.

rows = 3
columns = 4

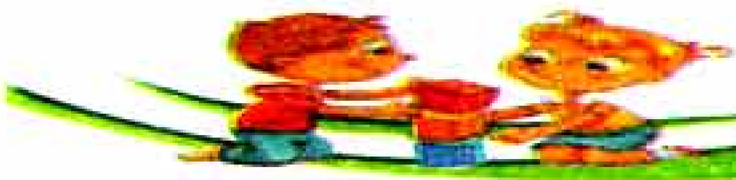


This is a ...... by ..... array.

rows = 2
columns = 1



This is a ...... by ..... array.





Review on Chapter (2)



1 Choose odd or even:

1 (odd – even)	310 (odd – even)
5 (odd – even)	217 (odd – even)
8 (odd – even)	7 + 5 (odd – even)
49 (odd – even)	6 + 4 (odd – even)
53 (odd – even)	213 + 512 (odd – even)
167 (odd – even)	760 + 532 (odd – even)
164 (odd – even)	111 + 111 (odd – even)
207 (odd – even)	955 (odd – even)



2 Complete:

1) The least odd number is ....

2) The greatest odd number formed of one number is ....

3) The greatest even number formed of one number is ....

4) The sum of any two even numbers is an .... number.

3 Write:

(a) Write 3 even numbers between 20 , 30

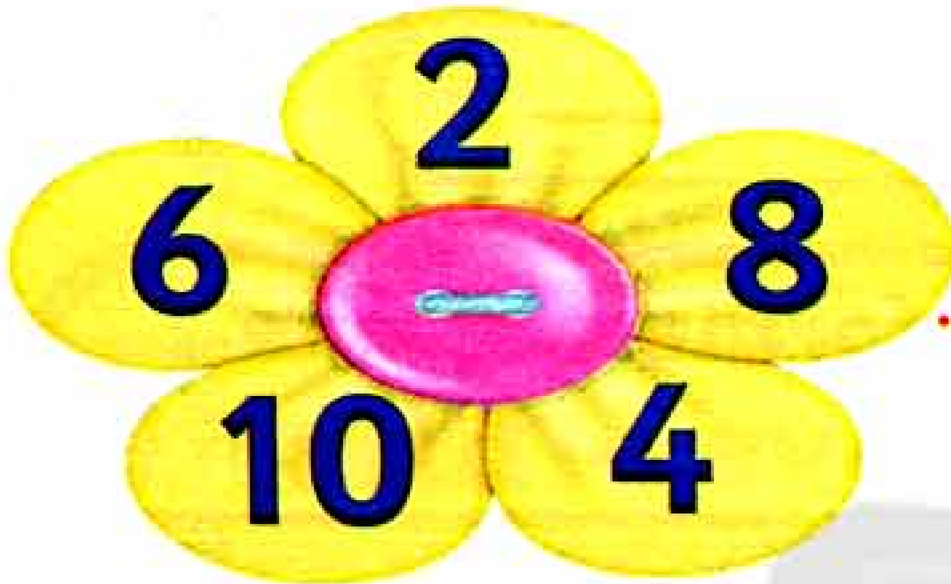
Numbers are: .... , ... , ...

(b) Write 3 odd numbers between 110 , 120

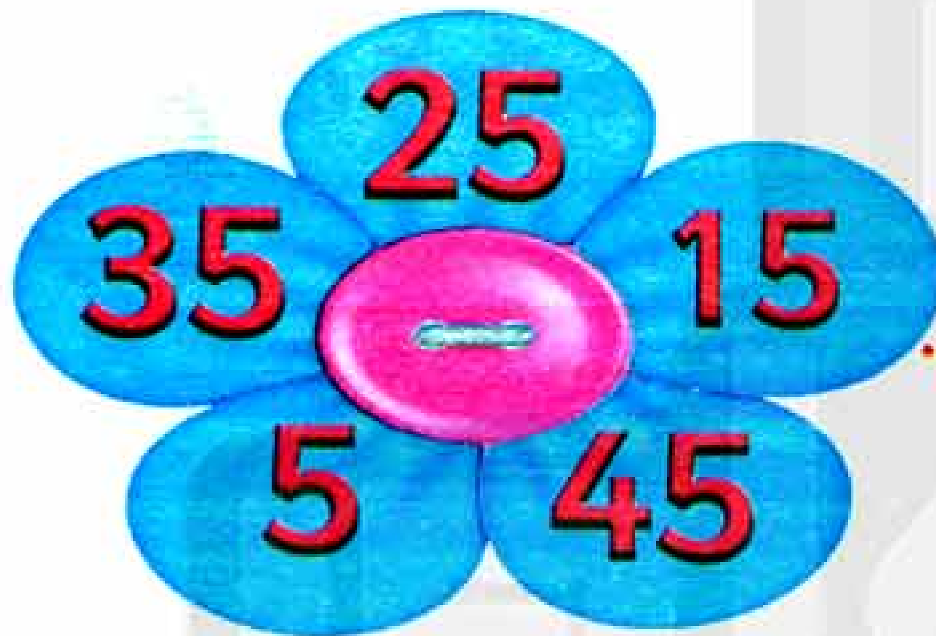
Numbers are: .... , ... , ...



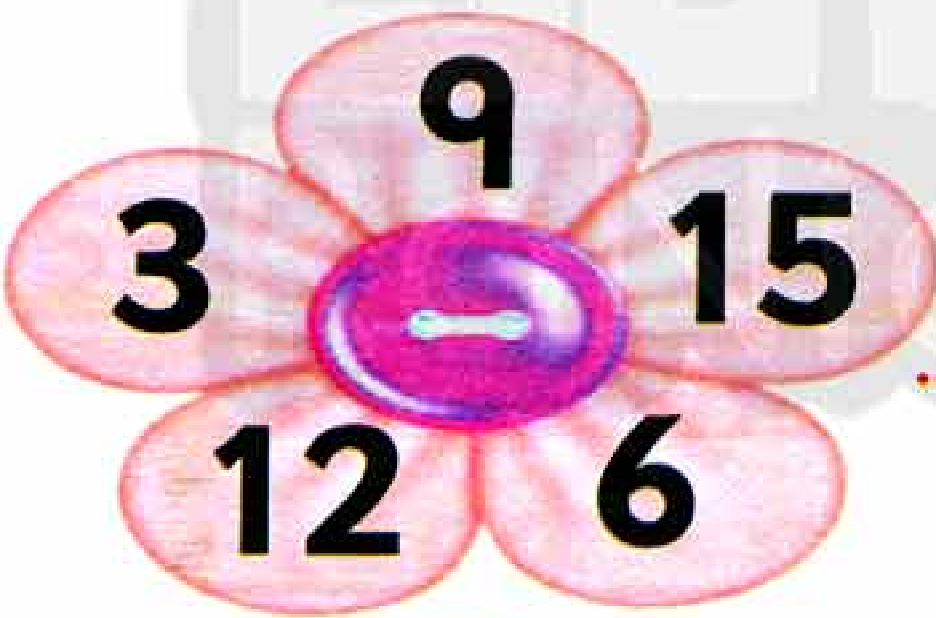
4 Use these numbers to make a pattern:



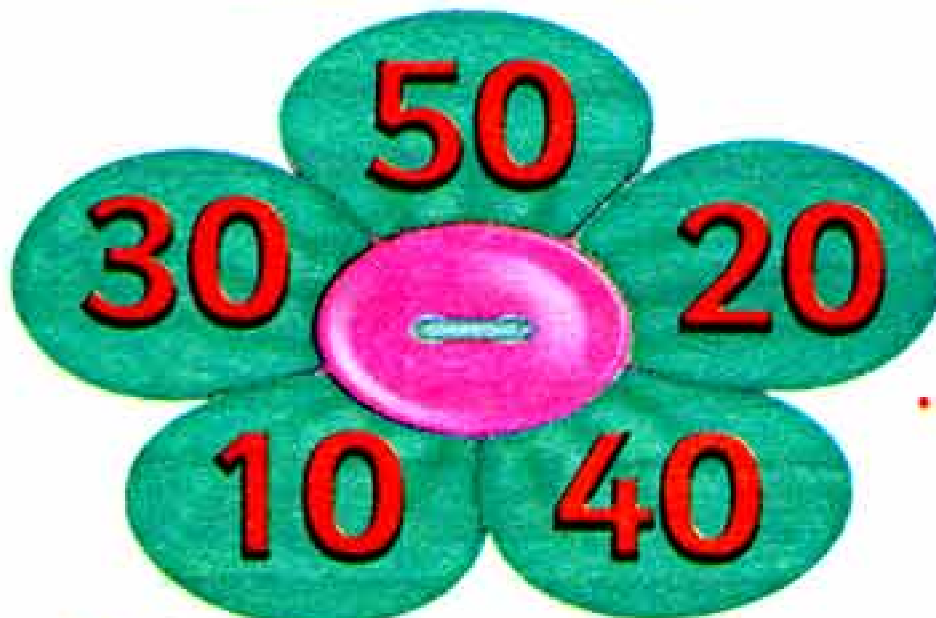
.... , ... , ... , ... , ...



.... , ... , ... , ... , ...



.... , ... , ... , ... , ...



.... , ... , ... , ... , ...





5 Complete the following patterns:

1) 0 , 2 , 4 , ... , ... , ... , ...

2) 3 , 6 , 9 , ... , ... , ... , ...

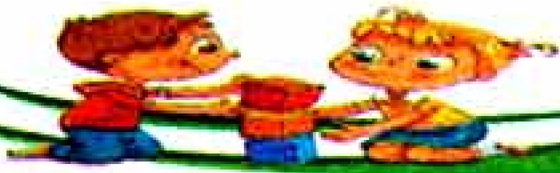
3) 12 , 15 , 18 , ... , ... , ... , ...

4) 66 , 70 , 74 , ... , ... , ... , ...

5) 1 , 3 , 5 , 7 , ... , ... , ... , ...

6 Write the rules according to the pattern:

Pattern	Rule
3, 6, 9, 12, 15, 18	....
5, 10, 15, 20, 25	....
10, 20, 30, 40, 50	....
95, 90, 85, 80, 75	....
59, 52, 45, 38, 31	....



7 Use the given rules to complete the patterns:

1) Rule: (+ 2 , - 3)

24 , ... , ... , ... , ...

2) Rule: (-1 , + 2)

27 , ... , ... , ... , ...



3) Rule: (- 7 , + 3)

77 , ... , ... , ... , ...

4) Rule: (+ 5 , - 3)

55 , ... , ... , ... , ...

8 Complete:

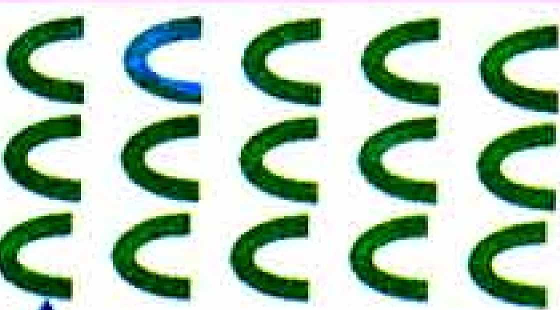
1) 

This shape is: ....

2) 

The part referred to is called:

....

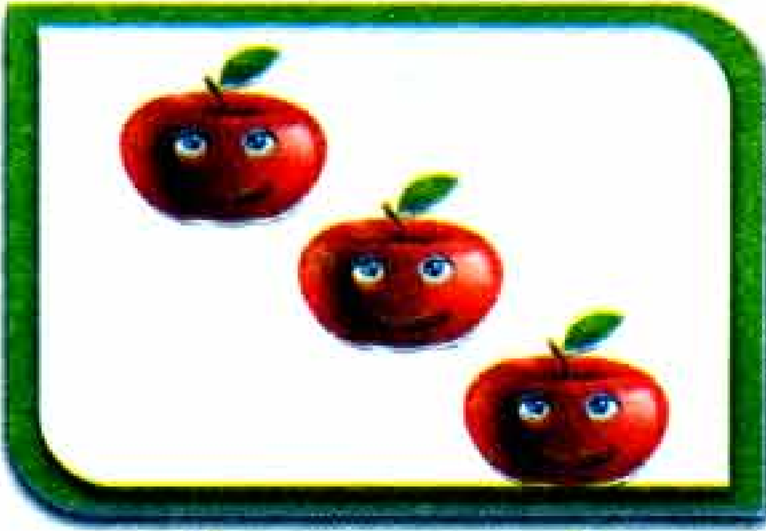
3) 

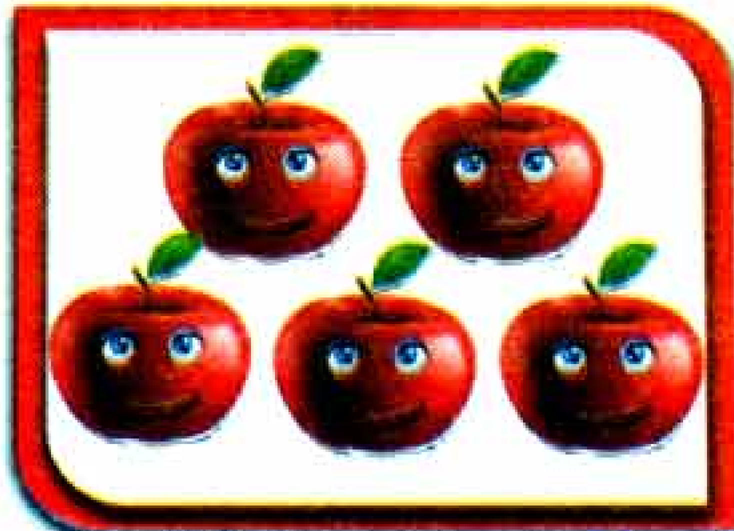
The part referred to is called:

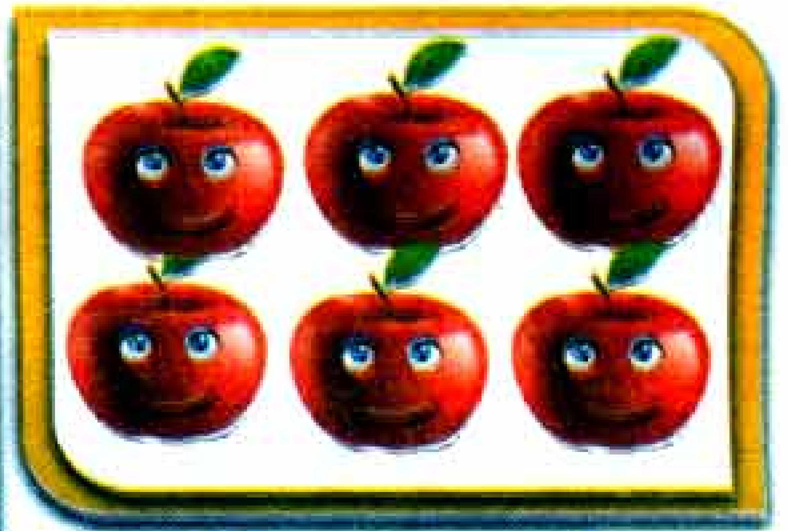
....



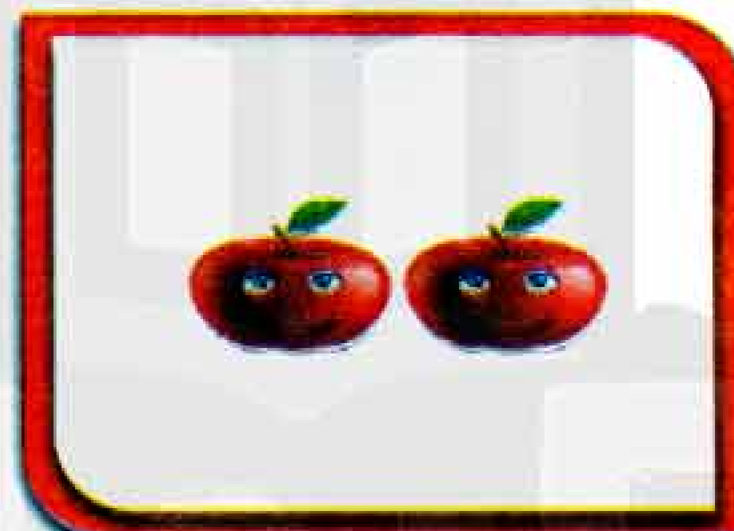
9 Tick (✓) under the shape that is an array:

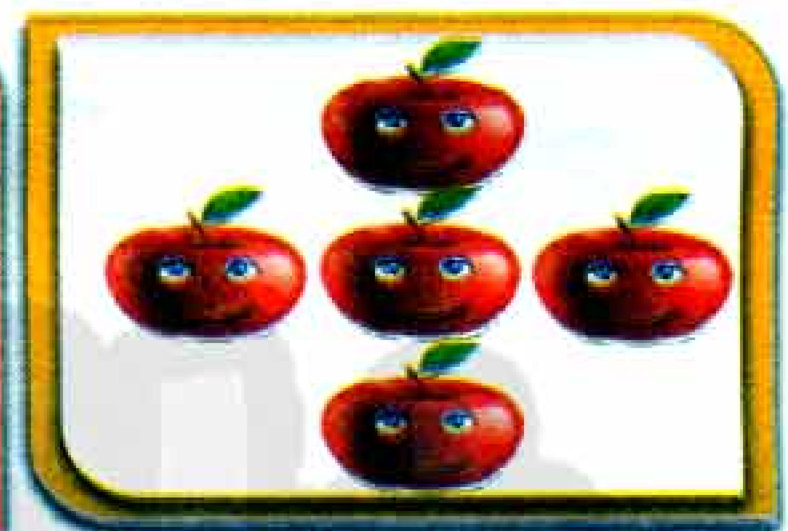

(..................)


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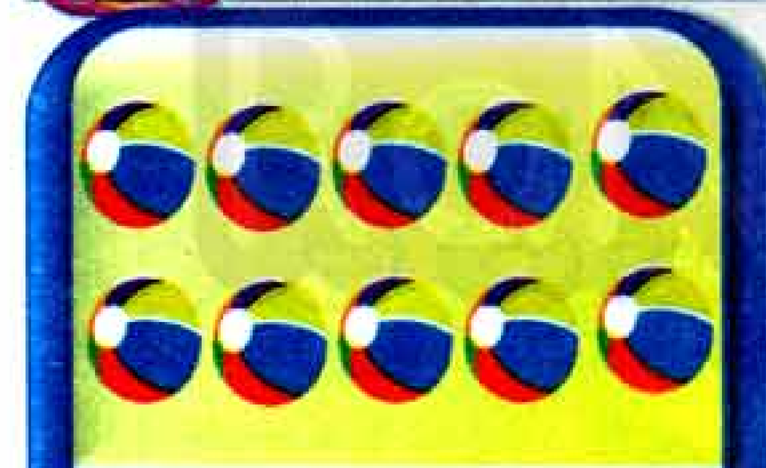

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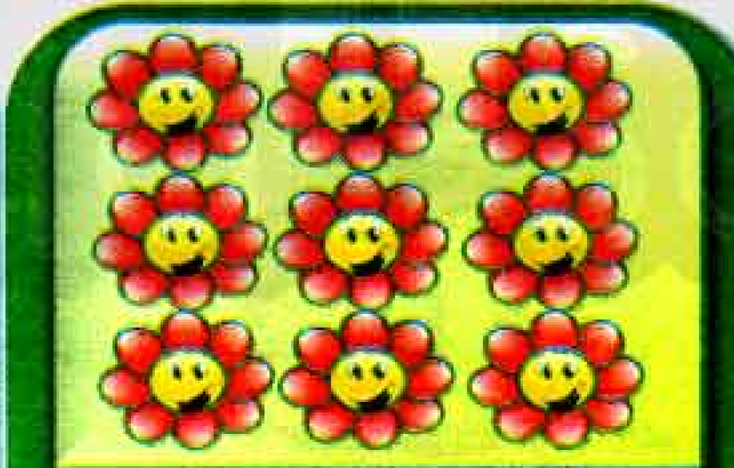

(..................)


(..................)

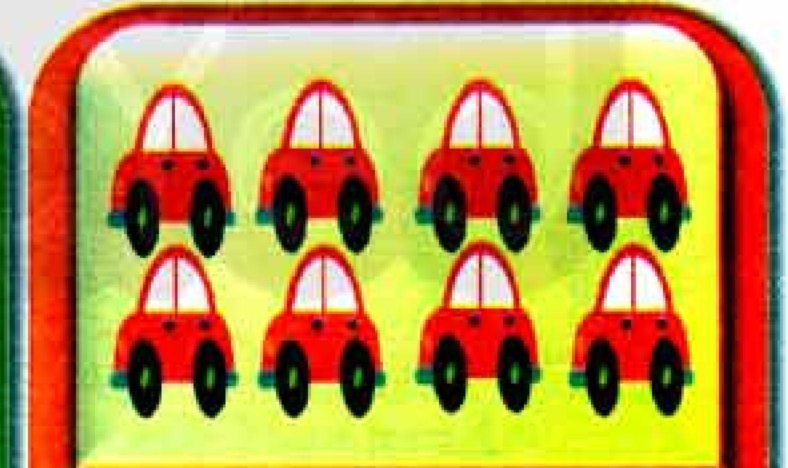
10 Complete:



Rows: ....
Columns: ....
Array's name
.... by ....
The equation is
....



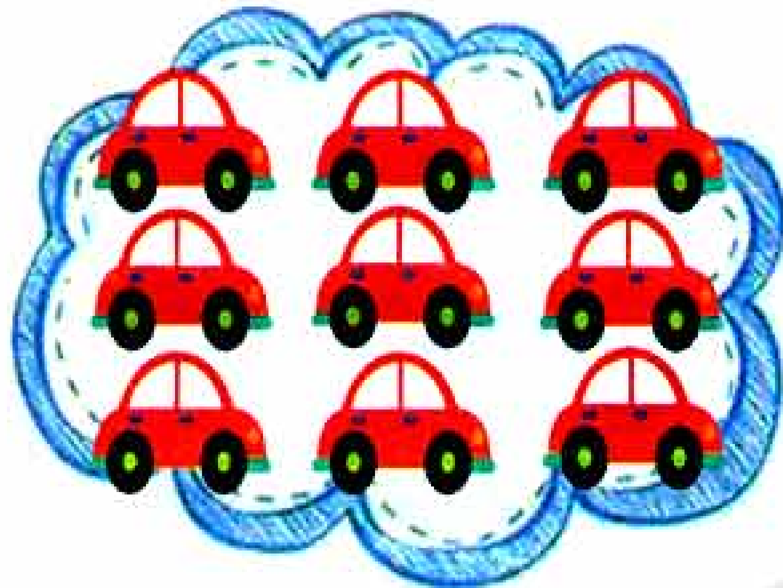
Rows: ....
Columns: ....
Array's name
.... by ....
The equation is
....



Rows: ....
Columns: ....
Array's name
.... by ....
The equation is
....



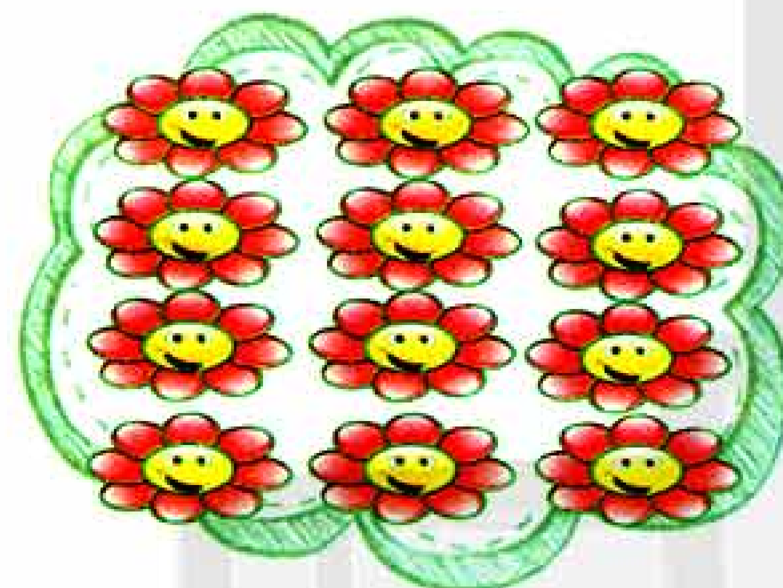
11 Match:



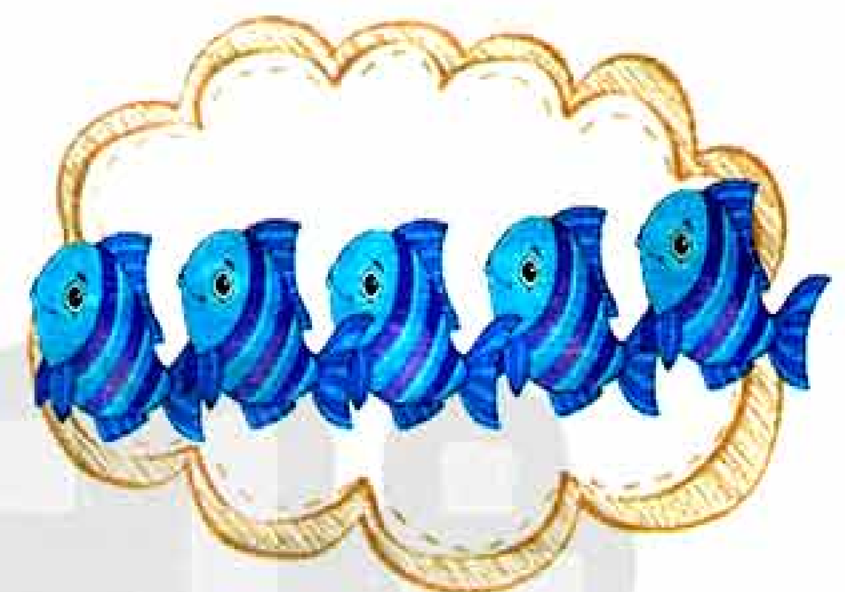






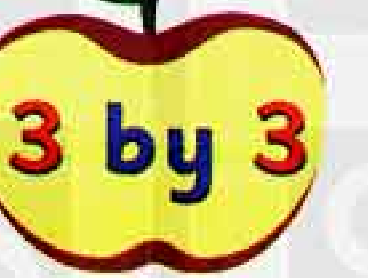


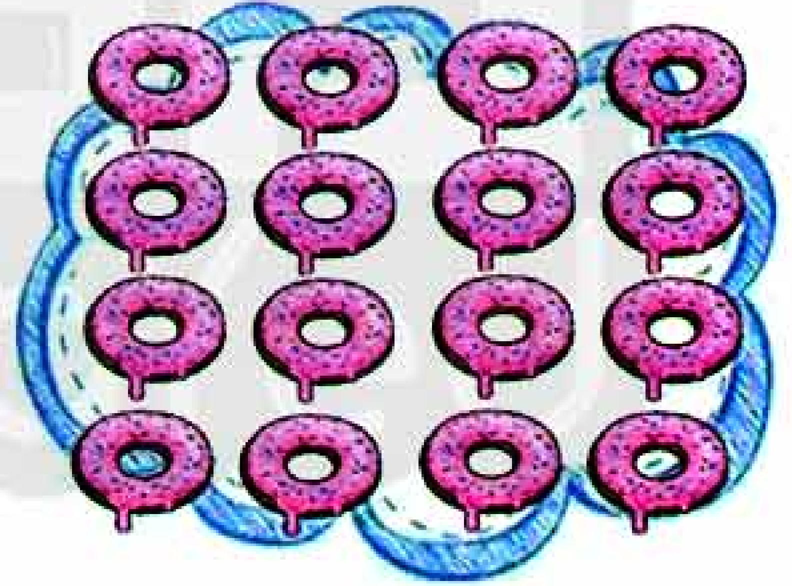








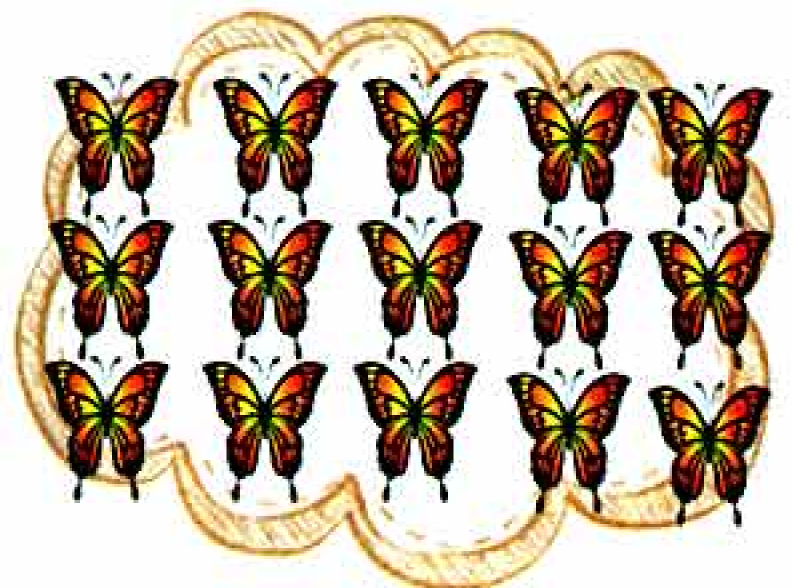














Chapter Three



Lesson (81) Estimating quantities 1

Outcomes

Students will:

- Participate in Calendar Math activities.
- Apply strategies to estimate quantities.
- Apply strategies to estimate sums and differences.



Estimation is a mental math strategy that we can use to help us find the value that is close enough to the actual value using careful thinking or quick calculations. It is not a random guess.

Note:

When we estimate, we don't expect to come up with an exact answer. We just want to get as close as possible.

Estimate the number of each group (try not to count):



....



....



....



....



....



....



Front – End Estimation

This estimation strategy means we just look at the front of the number, or the highest place value. We do not look at the other places.

EX: Estimate number 43.

Answer: The number 43 has two place, a tens place and a ones place. There is 4 in the Tens place, so we are going to think of 43 as 40.



Estimate the following numbers.

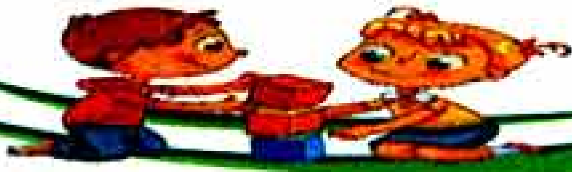
41 → 40	26 → ....
73 →	8 → ....
14 →	89 → ....
57 →	97 → ....
15 →	37 → ....

Add by estimating the numbers.

Example:

53 + 32
50 + 30 = 80

170 + 233
100 + 200 = 300





Estimate the sum as the example:

16 + 43 → 10 + 40 = 50	34 + 23 → ☐ + ☐ = ☐	273 + 123 → ☐ + ☐ = ☐
53 + 34 → ☐ + ☐ = ☐	264 + 312 → ☐ + ☐ = ☐	13 + 27 → ☐ + ☐ = ☐
43 + 52 → ☐ + ☐ = ☐	32 + 33 → ☐ + ☐ = ☐	172 + 315 → ☐ + ☐ = ☐

16 + 40 is about = 50

125 + 321 is about = ☐

34 + 23 is about = ☐

73 + 21 is about = ☐

53 + 34 is about = ☐

423 + 231 is about = ☐



Estimate the difference

Example:

48 – 21
40 – 20 = 20

340 – 155
300 – 100 = 200

1 Complete:

53 - 42 50-40 = 10	63 - 42 .....– .....=.....	62 - 42 .....– .....=.....
64 -16 .....– .....=.....	43 - 22 .....– .....=.....	82 - 53 .....– .....=.....
695-462 .....– .....=.....	32 -11 .....– .....=.....	774-235 .....– .....=.....
17 - 13 .....– .....=.....	345-126 .....– .....=.....	53 - 41 .....– .....=.....



2 Estimate using front-end estimation strategy:

a) 32 + 54 .... + ... = ...

b) 93 - 41 .... - .... = ...

c) 153 + 215 .... + ... = ...

d) 86 - 25 .... - .... = ...

e) 57 + 22 .... + ... = ...

f) 463 - 332 .... - .... = ...

g) 275 + 536 .... + ... = ...

2 Estimate then match:

13 + 38
.... + ...

98 - 36
.... - ....

68 + 16
.... + ...





Lesson (82) Estimating quantities 2

Outcomes

☞ Students will:

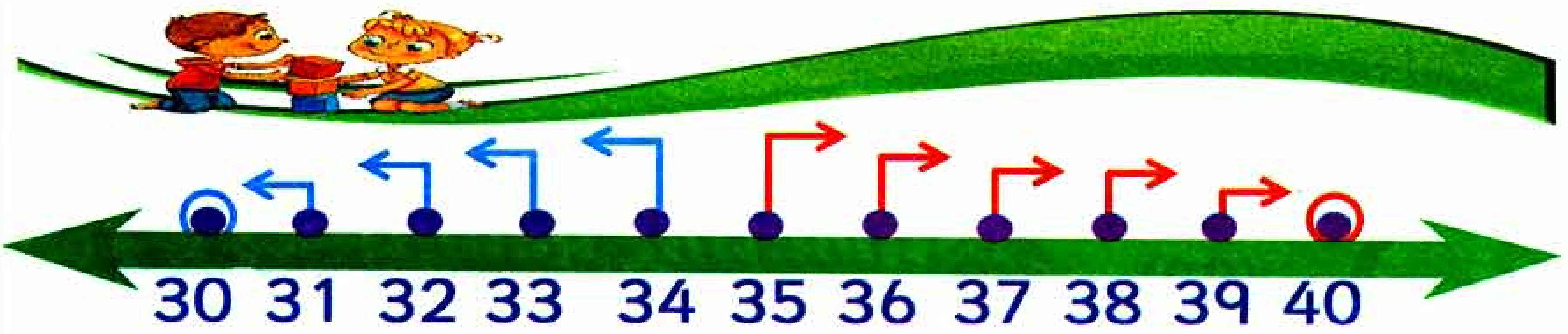
- Participate In Calendar Math Activities
- Round 2-digit numbers to the nearest Ten.
- Round two 2-digit numbers to estimate their sum.

Rounding strategy





The first four boys are closer to the small house but the last four boys are closer to the big house.
The fifth girl is in the middle, but if you ask her which house you want to live in, she will say the big house. So, the girl in the middle is close to the big house, too.



Numbers 31, 32, 33 and 34 are closer to the smaller ten (30), but numbers 35, 36, 37, 38 and 39 are closer to the greater ten (40).



Learn: If we use the front-end estimation strategy, we just look at the Tens place and think of 36 as 30 but to round 2-digit numbers, we also look at the Ones place and think about which Tens number we are closer to.

Activities

1 Round the following numbers to the nearest ten:

Number	Nearest 10	Number	Nearest 10
43	40	16	
52		76	
67		25	
83		42	
91		15	
24		55	
26		9	
13		2	



2 Round each number to the nearest ten then follow the color code:

20 40 50 60

40 ~~35~~	64	24	36
17	41	48	49
19	45	44	15
43	23	57	61

Estimate the result using rounding strategy:

64 + 25
↓ ↓
60 + 30 = 90

64 is closer to 60
and 25 is closer to 30



49 - 34

50 - 30 = 20

49 is closer to 50
and 34 is closer to 30

3 Estimate the results:

34 + 45 .... + ... = ...	52 + 14 .... + ... = ...	43 + 22 .... + ... = ...
67 - 43 .... - .... = ...	55 + 21 .... + ... = ...	45 + 15 .... + ... = ...
57 + 25 .... + ... = ...	93 - 27 .... - .... = ...	13 + 26 .... + ... = ...
56 - 9 .... - .... = ...	76 + 23 .... + ... = ...	54 - 32 .... - .... = ...



Lesson (83) Round 3-digit numbers to the nearest Hundred

Outcomes

☞ Students will:
- Participate in Calendar Math Activities.
- Apply estimation strategies in problem-solving situations.
- Estimate sums and differences.
- Round 3-digit numbers to the nearest hundred.

Example: Get the result using front-end estimation and rounding together:

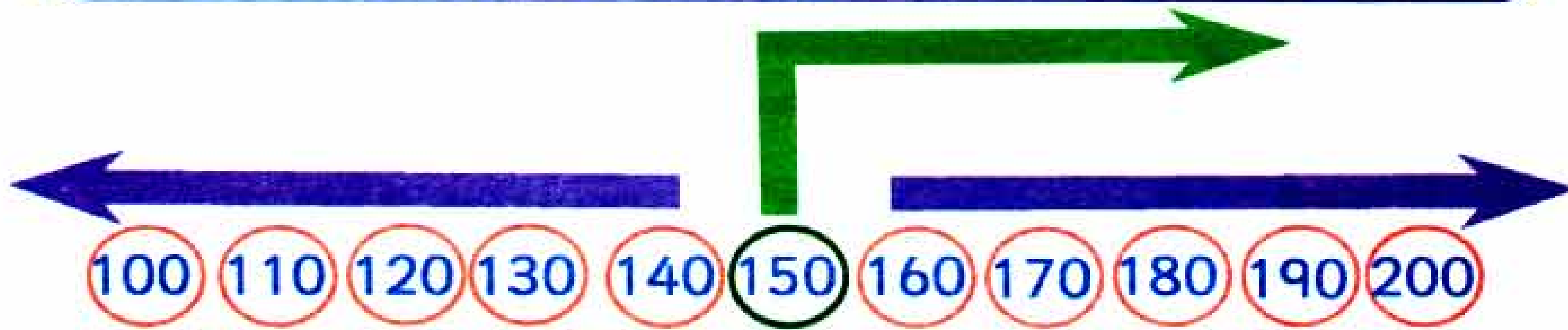
43 + 39
- Front-end strategy ⟶ 40 + 30 = 70
- Rounding strategy ⟶ 40 + 40 = 80

Do as the example:

Front-end strategy	Problem	Rounding strategy
30 + 20 = 50	36 + 23	40 + 20 = 60
...... + ... = ...	44 + 23	...... + ... = ...
...... + ... = ...	43 + 26	...... + ... = ...
...... - ...... = ...	93 - 78	...... - ...... = ...
...... - ...... = ...	67 - 23	...... - ...... = ...
...... + ... = ...	81 + 12	...... + ... = ...



Rounding to the nearest Hundred



100 110 120 130 140 150 160 170 180 190 200

- Numbers 110, 120, 130 and 140 are closer to 100
- Numbers 150, 160, 170, 180 and 190 are closer to 200

Round the following numbers to the nearest 100:

140 → 100	270 → 300
330 →	490 → ....
720 →	680 → ....
530 →	120 → ....

Complete the table as the example:

Front-end	Number	Rounding
200	230	200
....	470	....
....	360	....
....	790	....
....	560	....
....	840	....



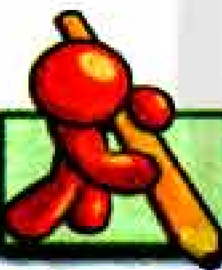
Example: Estimate the sum using the front-end estimation and rounding together:

130 + 480

Rounding	Front-end estimation
130 + 480	130 + 480
100 + 500 = 600	100 + 400 = 500

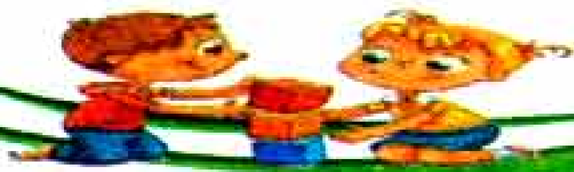


In front-end estimation we just look at the numbers in the place with the greatest value



Estimate the sum:

Front-end	Problem	Rounding
100 + 100 = 200	140 + 160	100 + 200 = 300
....	560 + 320	....
....	230 + 360	....
....	480 + 420	....
....	160 + 380	....
....	670 + 220	....





Estimate using the two strategies as the example:



160 + 420

Front-end estimation 100 + 400 = 500

Rounding 200 + 400 = 600



530 + 270

Front-end estimation ...... + ... = ...

Rounding ...... + ... = ...



360 + 310

Front-end estimation ...... + ... = ...

Rounding ...... + ... = ...



430 - 130

Front-end estimation ...... - ...... = ...

Rounding ...... - ...... = ...



920 - 370

Front-end estimation ...... - ...... = ...

Rounding ...... - ...... = ...



751 + 140

Front-end estimation ...... + ... = ...

Rounding ...... + ... = ...

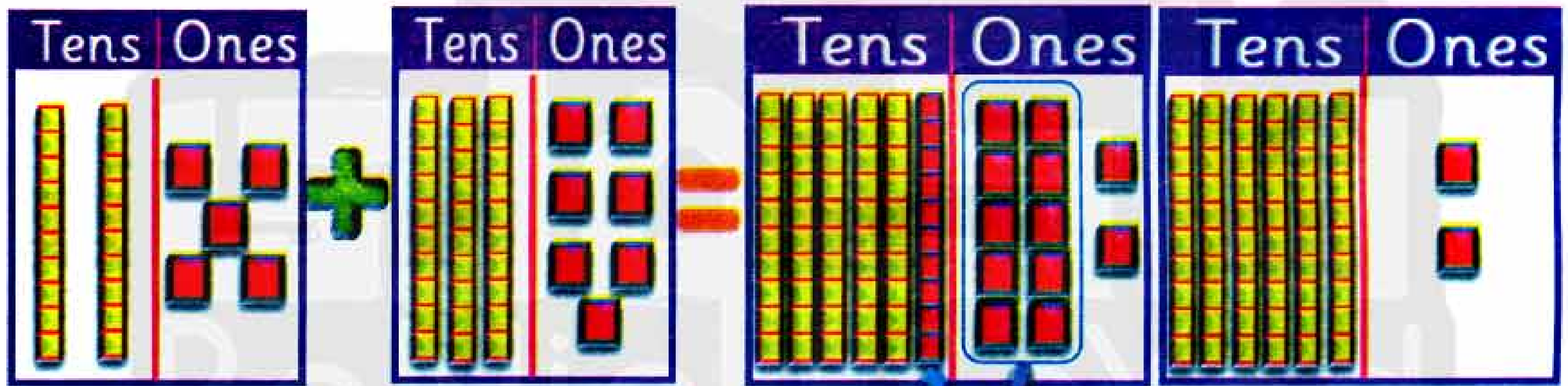
Lesson (84) Adding 2-digit numbers with regrouping 1

Outcomes

☞ Students will:

- Participate in Calendar Math activities.
- Add 2-digit numbers with regrouping.
- Explain why it is sometimes necessary to regroup to solve problems.

$$25 + 37 = 62$$



The total ones is more than 9, so we need to regroup 12 to 1 tens and 2 ones.





Activities

1 Draw ▯ for a ten ▪ for a one, then regroup to find the sum:

47 + 32 = ...

Tens	Ones

Tens	Ones

Tens	Ones

25 + 45 = ...

Tens	Ones

Tens	Ones

Tens	Ones

2 Find the sum with regrouping as the example:

53 + 39 = 92

Tens	Ones
5	3

Tens	Ones
3	9

Tens	Ones
9 8	1 2



55 + 37 = ...

Tens	Ones
......	......

Tens	Ones
......	......

Tens	Ones
......	......

48 + 39 = ...

Tens	Ones
......	......

Tens	Ones
......	......

Tens	Ones
......	......



3 Find the sum with regrouping as the example:

33 + 58 = 80 + 11 = 90 + 1 = 91

24 + 37 = ... = ... = ...

63 + 29 = ... = ... = ...

57 + 25 = ... = ... = ...

39 + 46 = ... = ... = ...


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Lesson (85) Adding 2-digit numbers with regrouping 2

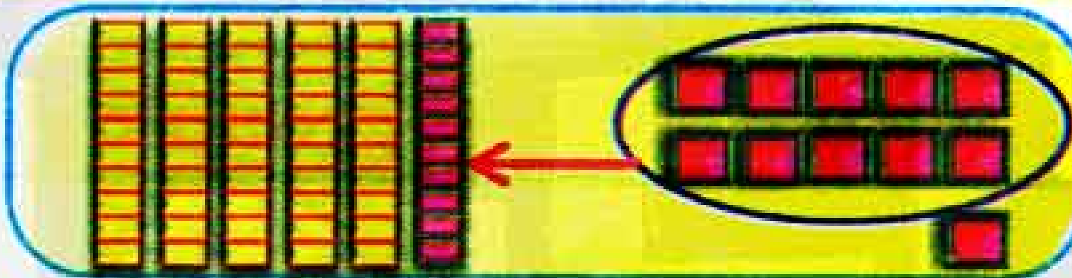
Outcomes

Students will:

- Participate in Calendar Math activities.
- Use place value models to regroup and add.
- Add two 2-digit numbers with regrouping.

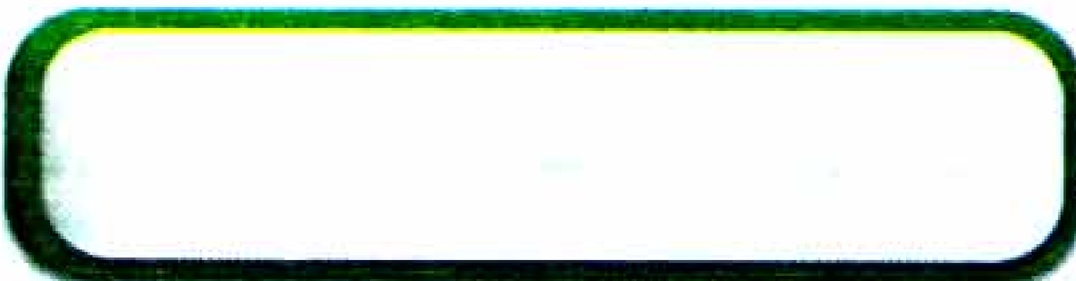
Activities

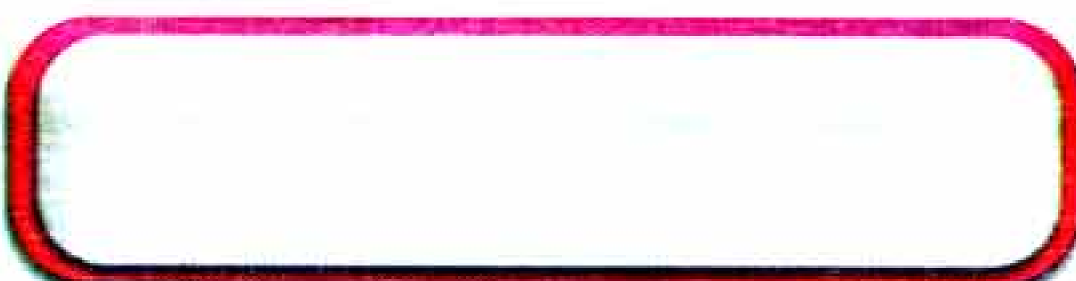
1 Get the sum using drawings to help you regroup:

26 + 35 =  61

32 + 18 =  ....

47 + 37 =  ....

53 + 26 =  ....

75 + 19 =  ....



2 Solve the addition problems with regrouping:

1 53 + 28	43 + 29	57 + 25	48 + 25
81	....	....	....
54 + 37	66 + 27	54 + 26	77 + 15
....	....	....	....

3 Get the sum using regrouping:

29 + 34 = 63

35 + 46 = ...

25 + 36 = ...

57 + 29 = ...

24 + 68 = ...

57 + 24 = ...

39 + 22 = ...

36 + 56 = ...

19 + 24 = ...

45 + 35 = ...

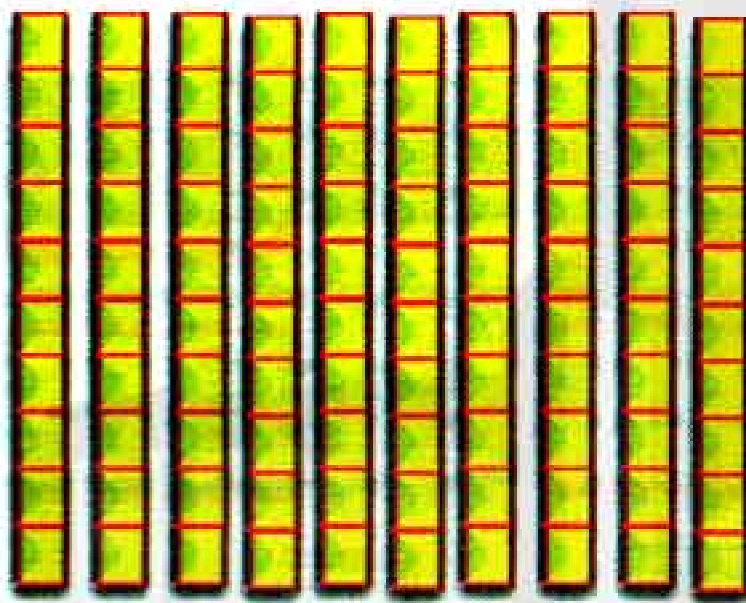
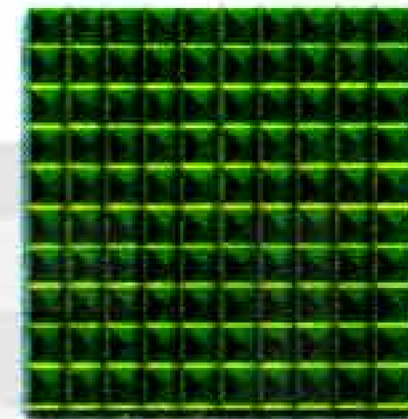


Lesson (86) Adding 3-digit numbers with regrouping 3

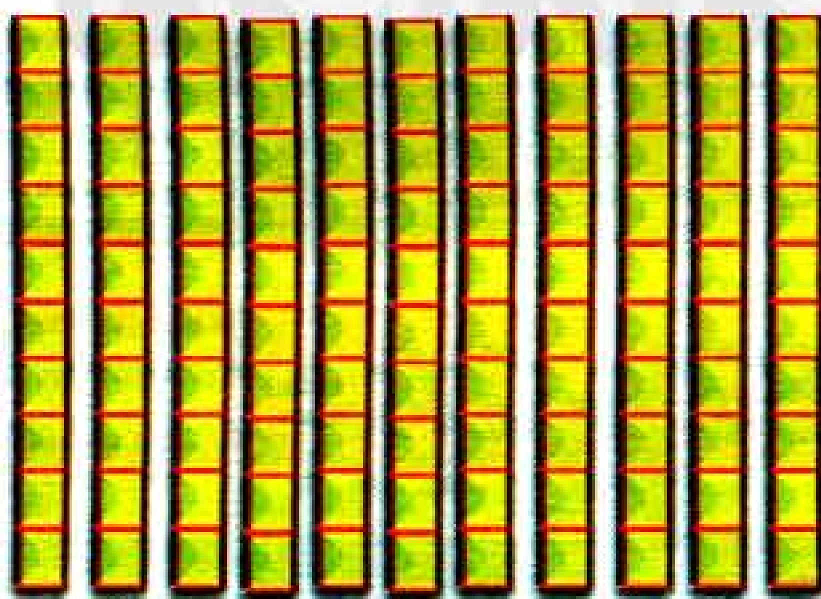
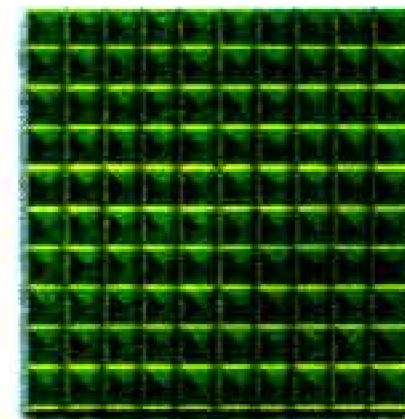
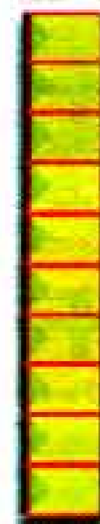
Outcomes

☞ Students will:
- Participate in Calendar Math activities.
- Use place value models to regroup and add.
- Add two 3-digit numbers with regrouping.

Remember

 = 

10 tens — one hundred

 =  

11 tens — one hundred one tens



Add with regrouping as the example:

63 + 52 = 115

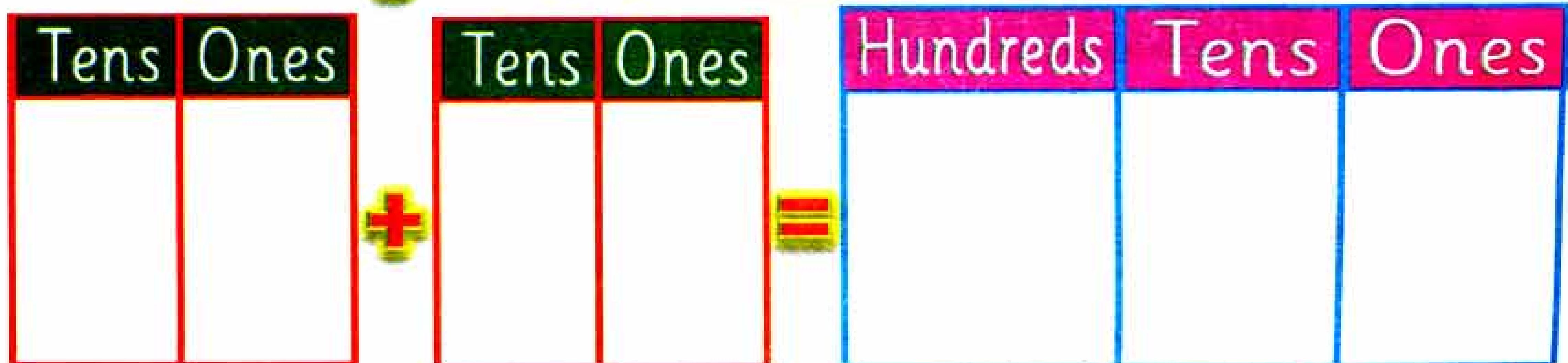


First we add the ones (3 + 2 = 5), next we add the tens (6 + 5 = 11), 11 is more than 9, so we regroup 11 (1 Tens and 1 Hundred)

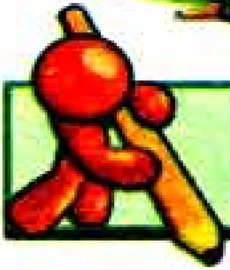
33 + 74 = ...



45 + 84 = ...







Find the sum as the example:

472
\+ 156

Hundreds	Tens	Ones
4	7	2
1	5	6
5	12	8

=

Hundreds	Tens	Ones
6	2	8

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

393
\+ 521

....

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

296
\+ 551

....

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones



486
+ 263
....

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

352
+ 155
....

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

271
+ 468
....

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

253
+ 425
....

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones



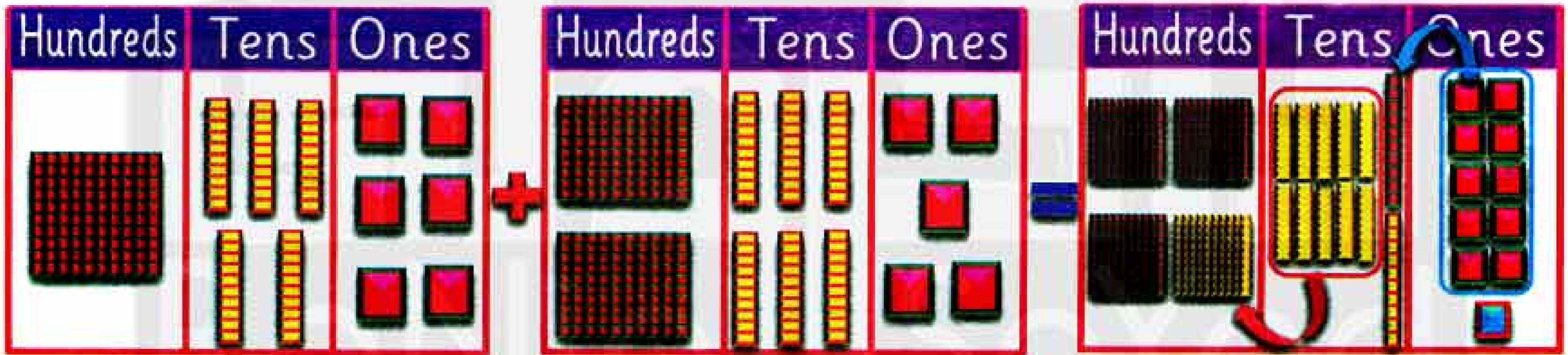
Lesson (87) Adding 3-digit numbers with regrouping 4

Outcomes

Students will:

- Participate In Calendar Math Activities.
- Add two 2-digit in numbers with regrouping.
- Apply mental math strategies to solve an addition problem involving regrouping.

156 + 265 = 421



First, we add the ones (5 + 6 =11).
We regroup 11 to 1 ones and 1 tens.
Then, we add tens (1 + 5 + 6 = 12).
We regroup 12 to 2 tens and 1 hundreds.
At the end we regroup hundreds (1 + 1 + 2 = 4).

Activities

Complete:

387 + 426 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

73 + 62 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

812 + 48 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones



163 + 277 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

569 + 364 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

387 + 426 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

73 + 62 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones



Lesson (88) Adding 3-digit numbers with regrouping 5

Outcomes

☞ Students will:

- Participate in Calendar Math Activities.
- Add 1-, 2- and 3-digit number with and without regrouping.
- Use place value models to regroup and add.
- Check answers to identify errors and misconceptions.



Use place value models to regroup and add as the example:

381 + 494 = 875

Hundreds	Tens	Ones

+

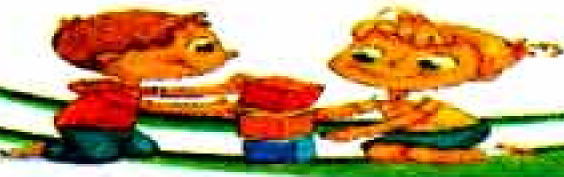
Hundreds	Tens	Ones

=

Hundreds	Tens	Ones







724 + 247 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

555 + 284 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones

423 + 269 = ...

Hundreds	Tens	Ones

+

Hundreds	Tens	Ones

=

Hundreds	Tens	Ones



639 + 256 = ...	Hundreds	Tens	Ones

628 + 276 = ...	Hundreds	Tens	Ones

567 + 366 = ...	Hundreds	Tens	Ones

359 + 297 = ...	Hundreds	Tens	Ones

Lesson (89) Adding with regrouping using abstract models

Outcomes

☞ Students will:
- Participate in Calendar Math Activities.
- Add 2- and 3-digit numbers with regrouping.
- Make connections between concrete and abstract models of regrouping.

Find the sum with regrouping:

236 + 38 = ...

Hundreds	Tens	Ones
2	1 3	6
	3	8
....	....	14

First we add the ones
(6 + 8 = 14)
Then we regroup 14 to
4 Ones and 1 Tens

Hundreds	Tens	Ones
2	1 3	6
	3	8
2	7	4

Then we add the Tens
(1 + 3 + 3 = 7)

236 + 38 = 274



362 + 191



Hundreds	Tens	Ones
3	6	2
1	9	1
		3

First we add the ones

(2 + 1 = 3)

Hundreds	Tens	Ones
1 3	6	2
1	9	1
	~~15~~	3

We add the tens (6 + 9 = 15)

We regroup 15 to 5 Tens

and 1 Hundreds.

Hundreds	Tens	Ones
1 3	6	2
1	9	1
5	5	3

We add hundreds

(1 + 3 + 1 = 5)

362 + 191 = 553



Activities

1 Find the sum using (Hundreds - Tens - Ones) chart:

47 + 82

Hundreds	Tens	Ones
....	....	....

= ....

226 + 218

Hundreds	Tens	Ones
....	....	....

= ....

430 + 299

Hundreds	Tens	Ones
....	....	....

= ....



693 + 235

Hundreds	Tens	Ones
....	....	....

= ....

467 + 371

Hundreds	Tens	Ones
....	....	....

= ....

563 + 228

Hundreds	Tens	Ones
....	....	....

= ....



Lesson (90) Math error identifying

Outcomes

☞ Students will:
- Participate in Calendar Math activities.
- Identify and correct errors in estimation and regrouping problems.
- Add 1-, 2-, and 3-digit numbers with and without regrouping.

1 Put (✓) or (×):

1) 64 + 6 = 60 ....

2) Estimating 37 + 54 by front-end strategy is 40 + 50. ....

3) 85 to the nearest ten is 80. ....

4) The estimated difference rounding of 174 - 72 is 170 - 70 = 100 ....

5) 264 + 18 = 272 ....

6) The estimated sum of 89 - 64 = 30 ....



7) 59 is closer to 50 (to the nearest 10). ....

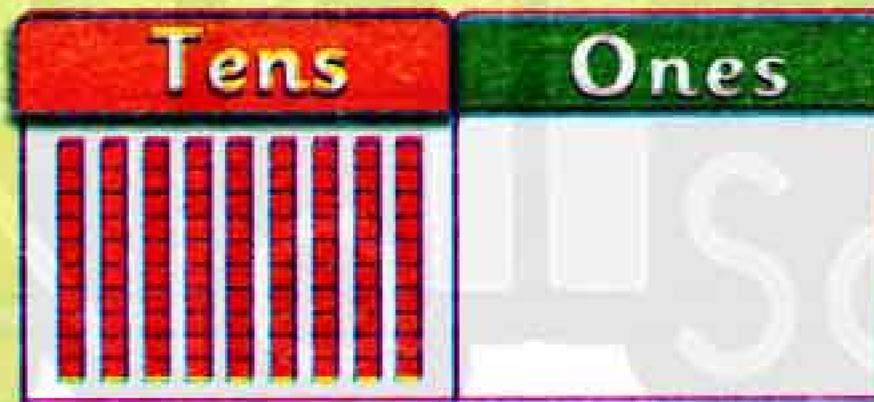
8) When we round 45 to the nearest ten, the answer is 40. ....

9) 240 + 72 = 212 ....

10) When we round to estimate the sum of 37 + 27, the problem will be as 40 + 30 = 80. ....

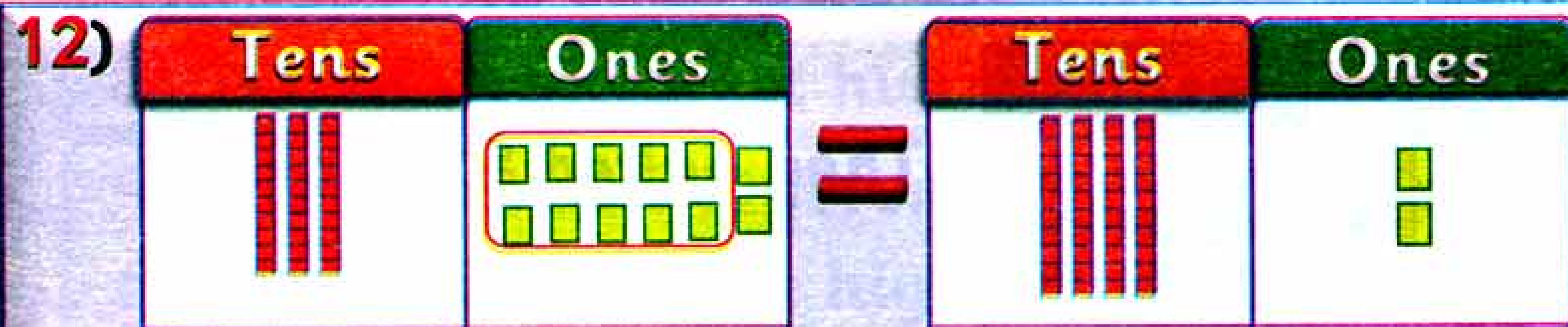
11) Hanan has 46 pounds and her sister Mona has 44 pounds. How many pounds do they have all together?

They have ......

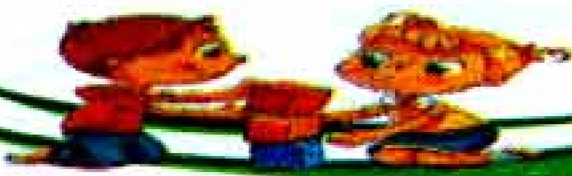


....

12)



....



3 Check each problem. If the answer is incorrect, mark it with ✖, if the answer is correct mark it with ★, correct one of them:

123 + 59 = 172 (.........)

99 + 8 = 107 (.........)

150 + 67 = 217 (.........)

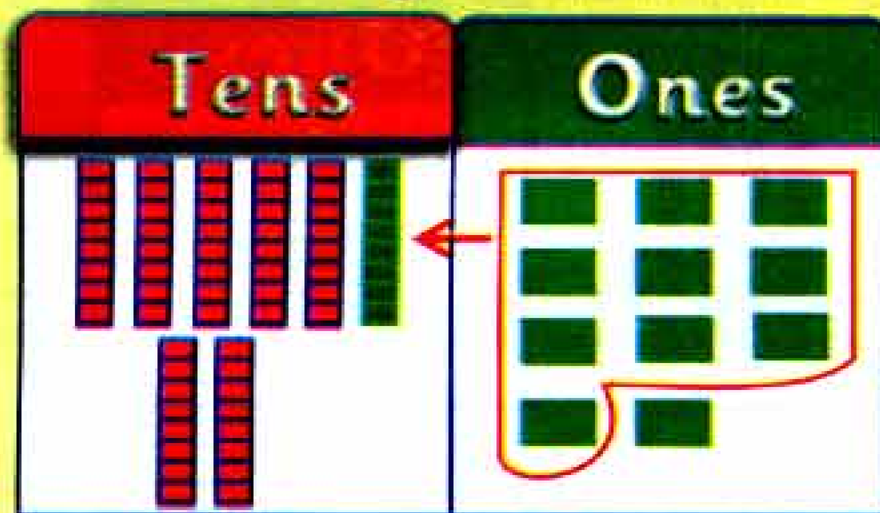
35 to the nearest ten is 30 (.........)

78 – 21 round to the nearest 10
80 – 20 = 70 (......)

Estimate the difference: 150 – 82 → 100 – 80 = 20 (......)

Estimate the sum: 48 + 38 → 50 + 40 = 90 (......)

Laila baked 56 cookies. Amer baked 25 cookies.
How many cookies did they bake all together?



They baked 81 cookies.

(......)



Review on Chapter (3)

1 Choose the correct answer:

1) 64 to the nearest ten is (50 – 60 – 70)

2) 275 to the nearest ten is (80 – 270 – 280)

3) 399 to the nearest ten is (100 – 390 – 400)

4) 4 is closer to (0 – 1 – 5)

5) If we deal with the sum of 25 + 76 using front-end strategy, the estimated sum will be (90 – 100 – 80)

6) The estimated sum of 36 and 54 is (80 – 90 – 100)

7) If the estimated sum of 67 + 27 = 80, so the used strategy is (rounding to the nearest ten – front-end)

8) 180 to the nearest hundred is (80 – 200 – 280)

9) The estimated difference by using front-end strategy through the highest place value between the numbers 490 , 210 is (200 – 250 – 300)

10) 250 to the nearest hundred is (200 – 300 – 400)



2 Estimate the result using front-end strategy:

74 + 35 = ...
26 + 37 = ...
92 + 44 = ...
64 + 85 = ...
260 + 370 = ...
480 + 75 = ...

370 + 48 = ...
610 + 270 = ...
320 + 330 = ...
450 + 350 = ...
690 + 290 = ...
480 + 310 = ...

3 Find the result:

64 + 25 = ...	63 + 27 = ...	27 + 23 = ...	47 + 32 = ...
63 + 72 = ...	43 + 29 = ...	163 + 155 = ...	271 + 214 = ...
639 + 226 = ...	146 + 272 = ...	253 + 129 = ...	472 + 291 = ...



4 Find the result:

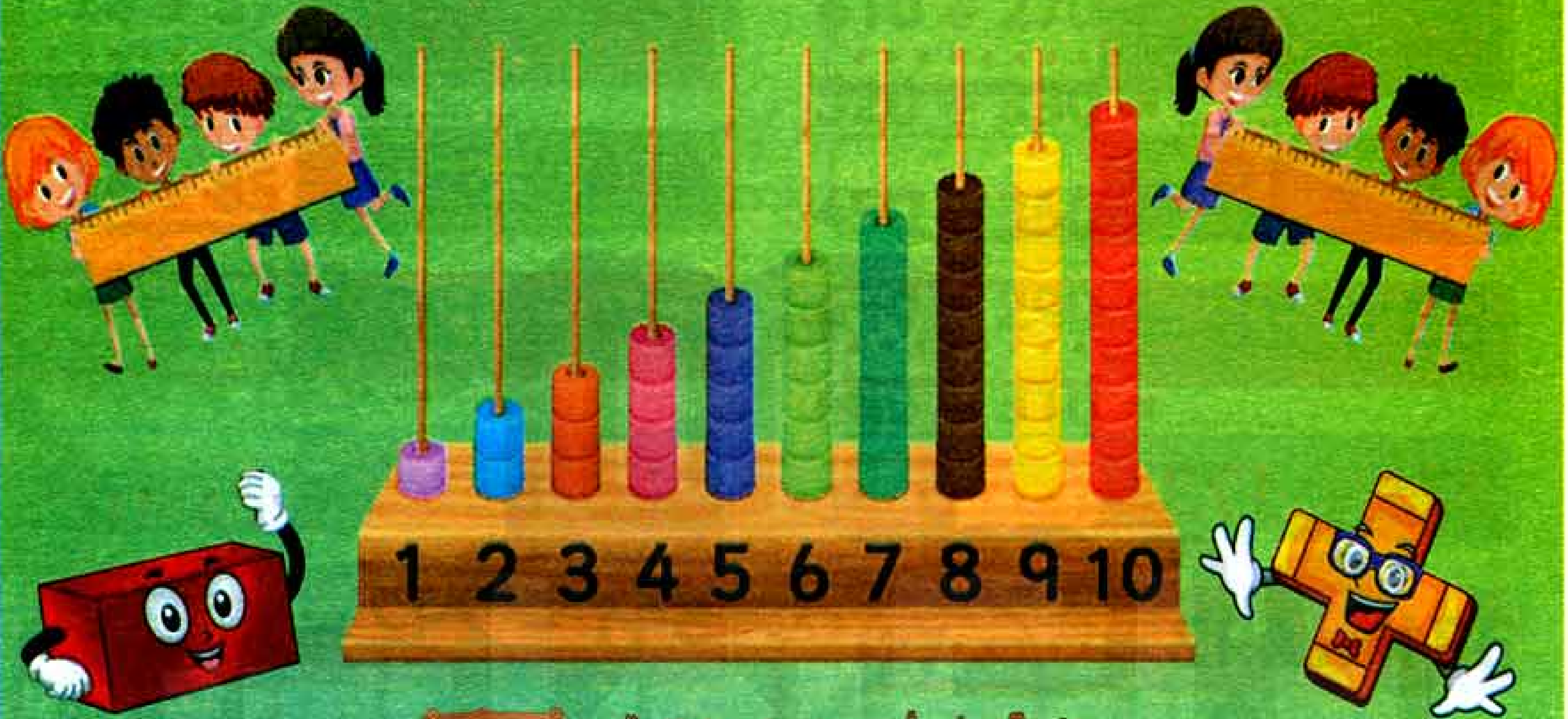
36 + 25 = ...	409 + 319 = ...
64 + 27 = ...	621 + 229 = ...
76 + 19 = ...	456 + 329 = ...
83 + 28 = ...	374 + 127 = ...
276 + 173 = ...	316 + 276 = ...
391 + 492 = ...	541 + 292 = ...

5 Estimate the difference to the nearest 10 then match:

81 – 62 = ...	40
56 – 29 = ...	20
91 – 47 = ...	10
86 – 78 = ...	30



Chapter Four



- Lesson (91) Fact family (ies) / The relationship between addition and subtraction
- Lesson (92) Adding and subtracting using the number line
- Lesson (93) Story problems involving subtraction
- Lesson (94) Decomposing 2-Digit Numbers into Combinations of Tens and Ones
- Lesson (95) Cluster problems
- Lesson (96) Subtracting 2-Digit Numbers with Regrouping (1)
- Lesson (97) Subtracting 2-Digit Numbers with Regrouping (2)
- Lesson (98) Subtracting 2- and 3-digit numbers with regrouping (1)
- Lesson (99) Subtracting 2- and 3-digit numbers with regrouping (2)
- Lesson (100) Practice on addition and subtraction

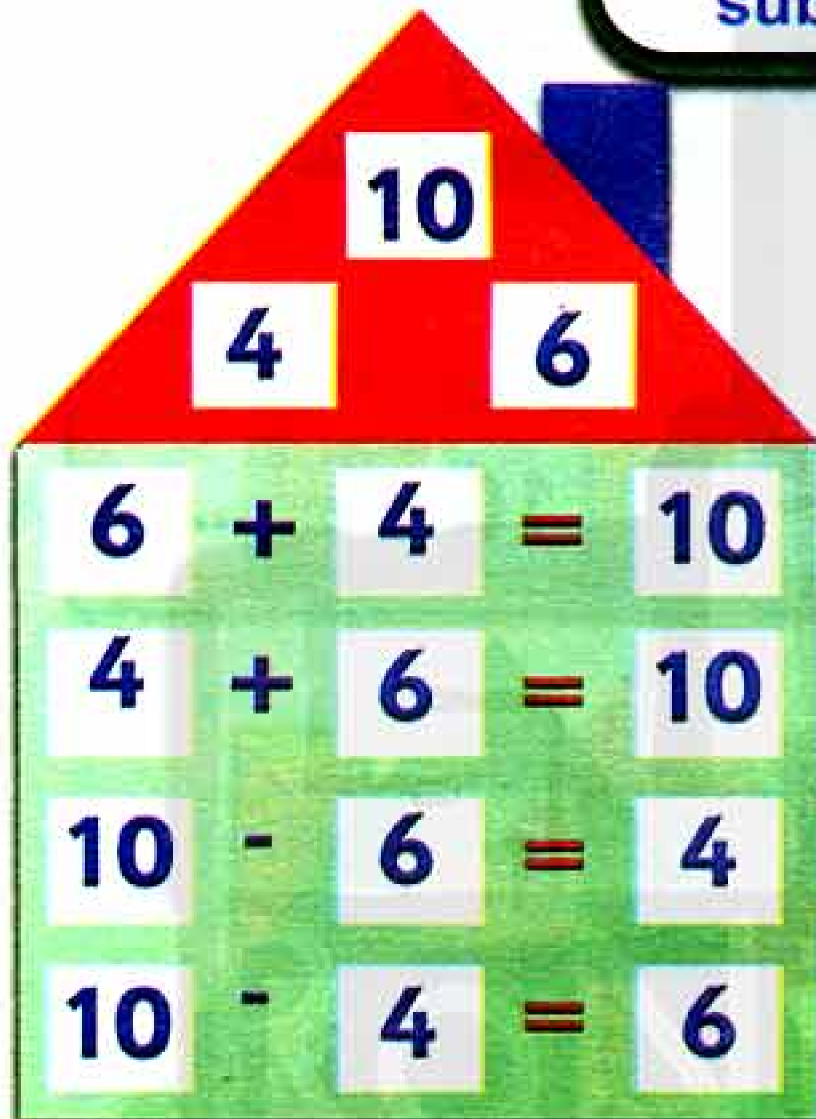


Lesson (91) Fact family(ies) / The relationship between addition and subtraction

Outcomes

Students will:

- Participate in Calendar Math activities.
- Create addition and subtraction sentences using fact families.
- Explain the relationship between addition and subtraction.





★The addition and subtraction are inverse or opposite of each other.

★We can use one to help us with the other.
★These three numbers are part of a family.
★Mathematicians call them fact families.

Fact family

★There is a relationship between these three numbers 6, 4 and 10.
★If we have 10 and take away or subtract 4, we have a difference of 6.

We conclude

6 + 4 = 10 , 10 - 6 = 4 , 10 - 4 = 6





12					
7	5				
7	+	5	=	......	
5	+	7	=	......	
12	-	7	=	......	
12	-	5	=	......	

15				
10	5			
10	+	5	=	......
5	+	10	=	......
15	-	5	=	......
15	-	10	=	......

24				
20	4			
20	+	4	=	......
4	+	20	=	......
24	-	4	=	......
24	-	20	=	......

13				
9	4			
9	+	4	=	......
4	+	9	=	......
13	-	9	=	......
13	-	4	=	......



34				
30		4		
......	+	......	=	......
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

25				
10		15		
......	+	......	=	......
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

10				
7		3		
......	+	......	=	......
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

17				
٩		8		
......	+	......	=	......
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......



	80			
60		20		
......	+	......	=	......
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

	35			
30		5		
......	+	......	=	......
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

Activities

1 Complete as the example using fact families:

4	+	3	=	7
3	+	4	=	7
7	-	3	=	4
7	-	4	=	3

5	+	6	=	11
6	+	......	=	......
......	-	......	=	......
......	-	......	=	......



34	+	11	=	45
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

17	+	10	=	27
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

25	+	15	=	40
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

12	+	5	=	17
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

35	+	10	=	45
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......

55	+	15	=	70
......	+	......	=	......
......	-	......	=	......
......	-	......	=	......



2 Complete as the example using fact families:

4 + 5 = ...	4	.... - 4 = 5
.... - 5 = 4	5	5 + ... = ٩
	....	

.... + 2 = 7	....	7 - .... = 2
7 - 2 = ...	2	2 + ... = 7
	7	

6 + ... = 11	6	11 - .... = 5
11 - .... = 6	....	5 + ... = 11
	11	

.... + 10 = 15	5	5 + ... = 15
15 - .... = 5	10	.... - 5 = 10
	15	

.... + 3 = 10	....	10 - 7 = ...
3 + ... = 10	3	10 - .... = 7
	10	

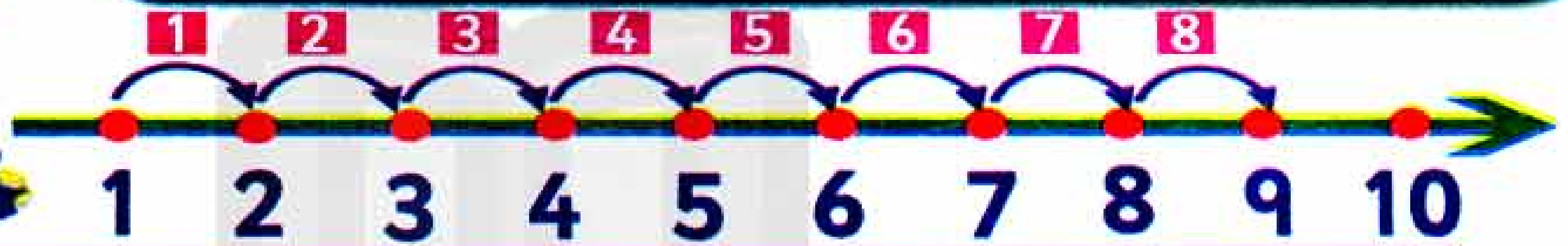
Lesson (92) Adding and subtracting using the number line

Outcomes

Students will:

- Participate in Calendar Math activities.
- Use a number line to subtract.
- Investigate the relationship between addition and subtraction using a number line.

Remember



1 2 3 4 5 6 7 8 9 10

The number line is:

- A great tool to help us see the distance between numbers.
- When we start at (1) and land at (9), we make 8 hops.
- Number line can help us in addition and subtraction problems.

Example 1

Add 12 + 7 using the number line:



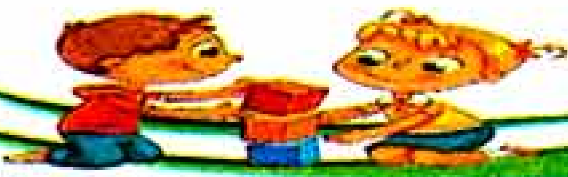
12 13 14 15 16 17 18 19 20 21

We started at 12 and made 7 hops, we landed at (19).

12 + 7 = 19

Notice

This strategy is called **counting on.**





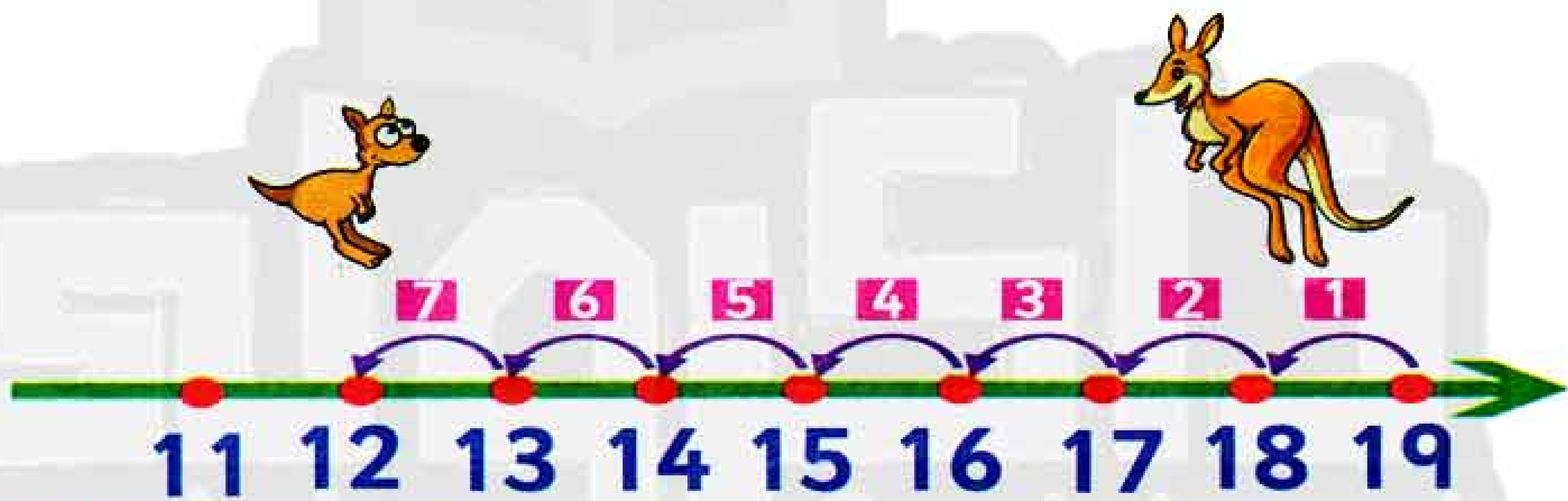
Add 7 + 12 using the number line:



7 + 12 = ...



Subtract 19 - 7 using the number line:





We started at 19 and hoped back 7 hops, we landed at (12).

19 - 7 = 12



This strategy is called **counting back**.





2 Try yourself

Subtract 19 - 12 using the number line:



19 - 12 = ...



Complete this fact family:

12 + 7 = ... | 7 + 12 = ...

19 - 7 = ... | 19 - 12 = ...

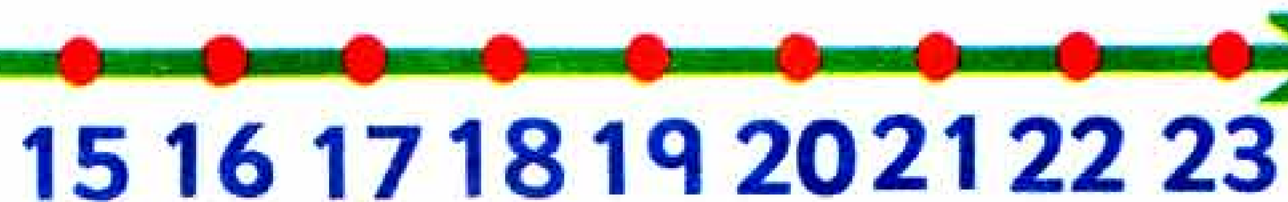


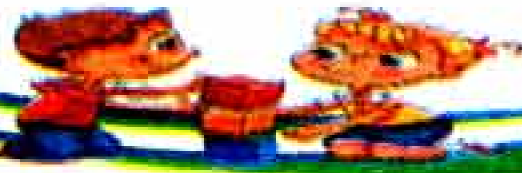
1 Complete using the number line:

16 + 5 = ...



23 - 6 = ...





2 Complete using the number line:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

a) 17 − 5 = ……

b) 15 − 9 = ……

c) 18 − 12 = ……

d) 17 − 8 = ……

e) 16 − 9 = ……

f) 19 − 12 = ……

20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

g) 27 − 5 = ……

h) 35 − 9 = ……



Lesson (93) Story problems involving subtraction

Outcomes

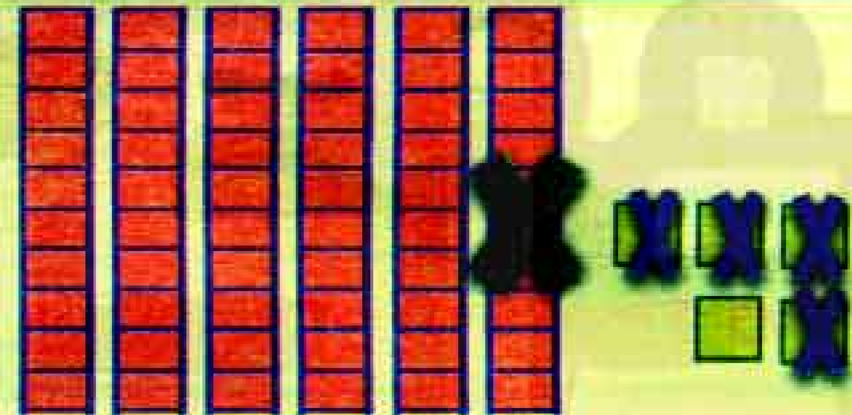
Students will:
- Participate in Calendar Math Activities.
- Solve story problems involving subtraction.
- Identify words that signal them to subtract to solve a problem.

Solve story problems with different ways:

Adel had 65 pounds. He gave his sister 14 pounds.
How many pounds does Adel have now?

The first way by using 

The result = 65 - 14 = 51



The second way by using number chart:

61	62	63	64	65	66	67	68	69	70
51	52	53	54	55	56	57	58	59	60

The result = 65 - 14 = 51

The third way by using number line:



The result = 65 - 14 = 51



Subtraction words: difference - less than - more than - How much / many more - How much / many less - left over - spent - gave - taken



The order in addition problem does not matter (3 + 4) and (4 + 3) are the same, but the order in subtraction matters, (10 – 7) and (7 – 10) are not the same. We should start with the greater number in subtraction problems.

Activities

1 Do these problems:

1) Hala counts 335 sunflower seeds. She places 98 of the seeds in bowl. How many seeds left?

Answer: ....
....
....

2) There were 75 an ant in ant hill, 13 ants left. How many ants are there now?

Answer: ....
....
....



3) There were 35 monkeys in the yard of the zoo, 7 monkeys ran into the monkey house. How many monkeys left in the yard?

Answer: ....

....

....

4) 228 students like red, 29 students like blue. How many more students like blue than red?

Answer: ....

....

....

5) There are 25 chairs in one classroom and there are 28 chairs in another classroom. How many chairs are there in all?

Answer: ....

....

....

6) The pet store has 84 small lizards; there are also 35 large lizards. How many lizards are there at the pet store in all?

Answer: ....

....

....



7) Rana jumped 382 times with a rope, Ola jumped 231 with a rope.
How many more jumps did Rana do than Ola?

Answer: ....
....
....

8) A store had 472 bouncy balls, they sold 155.
How many bouncy balls left?

Answer: ....
....
....

9) Zeinab hit 294 golf balls in a day; she hit 14 out of them in the morning. How many golf balls did she hit during the rest of that day?

Answer: ....
....
....

10) Ahmed saved LE 25 in December, LE 16 in January and LE 9 in February. How much money did Ahmed save in the three months?

Answer: ....
....
....



Lesson (94)
Decomposing 2-digit Numbers into Combinations of Tens and Ones

Outcomes

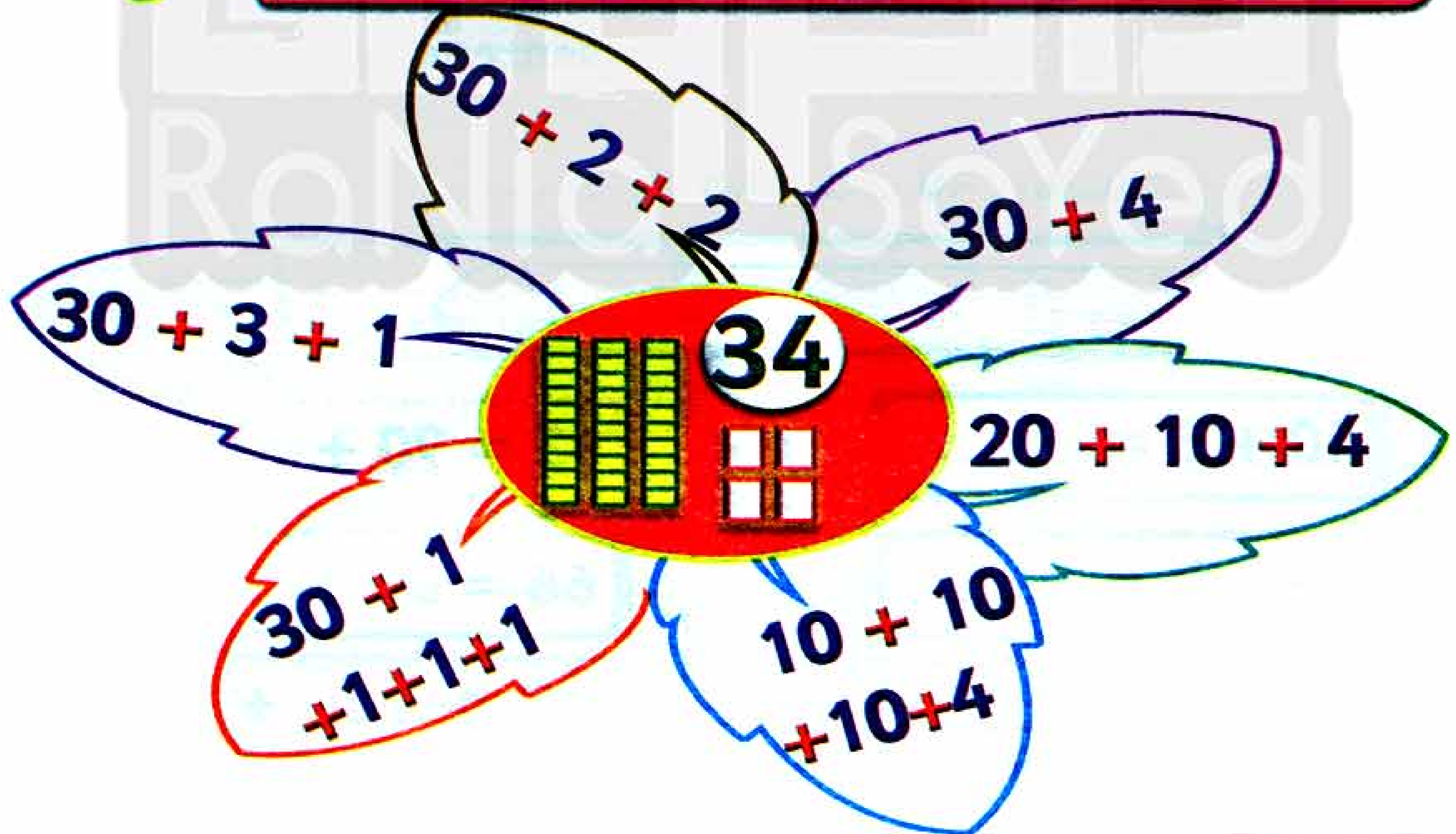
☞ **Students will:**
- Participate in Calendar Math activities.
- Decompose 2-digit numbers into combinations of Tens and Ones.
- Explain how decomposing numbers can be helpful.

Remember

Decomposing a Number means to break it into smaller parts.

Example

34 can be decomposed into
30 + 4 or 20 + 14 and so on
Decomposing Numbers makes them easier to work with.





Activities

1 Decompose into Tens and Ones in different ways:

29
= 10 + 10 + ٩
= .... + ٩
= 20 + 5 + ...

35
= 10 + 10 + 10 + ...
= 30 + 3 + ...
....

37
= 10 + 10 + 10 + 7
= 20 + ...
= 10 + ...

23
= 10 + 10 + 3
= .... + 3
= 20 + 2 + ...



We can write 20 + 5 = 25 (as an example) 25 = 20 + 5. A number sentence can have the whole (sum) written first or last, it does not matter. 40 + 5 = 45 the same → 45 = 40 + 5

2 Write the missing numbers:

40 + 5 =.........

93 = 90 + ...

30 + 7 =.........

66 = 60 + ...

20 + 17 =........

78 = ... + 70



30 + 15 = ...

58 = 8 + ...

.... = 30 + 16

36 = ... + 6

49 = ... + 9

40 = ... + 10

.... = 20 + 27

.... = 12+ 36

3 Record three different ways to decompose each number into smaller addends on the lines provided:

54
- = 20 + 20 + 10 + 4
- = 30 + 10 + 10 + 4
- = 40 + 10 + 4

36
- ....
- ....
- ....

47
- ....
- ....
- ....

94
- ....
- ....
- ....

72
- ....
- ....
- ....

65
- ....
- ....
- ....



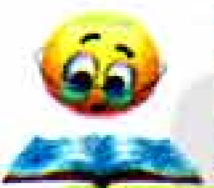
Lesson (95) Cluster problems

Outcomes

☞ Students will:
- Participate in Calendar math activities.
- Apply mental math strategies to subtract by Tens or Hundreds.
- Use known subtraction answers to solve new Problems.



Cluster problems are sets of three or more problems that use known facts from the first problem to answer a more difficult problem.



Example:

94 - 10 = ...
94 - 20 = ...
94 - 40 = ...
94 - 44 = ...

Each problem is kind of like a key that unlocks the solutions to the others

94 - 10 = 84 (We only subtracted one ten)
94 - 20 = 74 (We only subtracted one more ten)
94 - 40 = 54 (We subtracted two more tens)
94 - 44 = 50 (We subtracted more 4 ones)

Notice: We can use 94 - 44 = 50 as a key to the problem 94 - 45, we need only to subtract only one more. The result will be 49.

Activities

1 Complete:

86 - 10 =..............
86 - 20 =..............
86 - 40 =..............
86 - 46 =..............
86 - 47 =..............

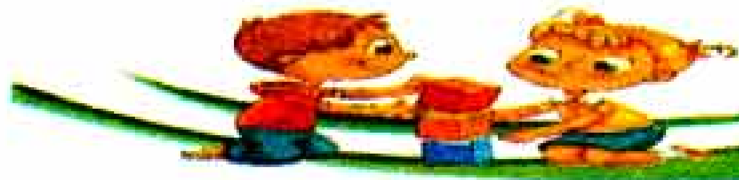
67 - 10 =..............
67 - 20 =..............
67 - 40 =..............
67 - 47 =..............
67 - 48 =..............

150 - 10 =..............
150 - 50 =..............
150 - 100 =..............
150 - 99 =..............

230 - 10 =..............
230 - 200 =..............
230 - 30 =..............
230 - 100 =..............

292 - 10 =..............
292 - 20 =..............
292 - 40 =..............
292 - 42 =..............

650 - 50 =..............
650 - 200 =..............
650 - 51 =..............
650 - 202 =..............



Mental math subtracting

Example 1

Subtract: 50 - 9

To find the difference easily, consider the problem is 50 - 10 = 40 then add 1.

The result is 41

Example 2

Subtract: 130 - 11

Consider the problem is 130 - 10 = 120 then subtract another 1.

The result is 119

Example 3

Subtract: 340 - 99

Consider the problem is 340 - 100 = 240 then add 1.

The result is 241

Example 4

Subtract: 670 - 201

Consider the problem is 670 - 200 = 470 then subtract another one.

The result is 469



2 Complete using mental math strategy:

94 - 44 = 50
94 - 45 = 49

86 - 20 = ...
86 - 21 = ...

76 - 30 = 46
76 - 29 = 47

230 - 100 = ...
230 - 99 = ...

460 - 60 = ...
460 - 61 = ...

970 - 30 = ...
970 - 32 = ...

650 - 50 = ...
650 - 48 = ...

340 - 100 = ...
340 - 102 = ...

3 Find the difference using mental math strategy:

74 - 9 = ...
74 - 11 = ...

89 - 19 = ...
89 - 21 = ...

140 - 41 = ...
140 - 39 = ...

560 - 99 = ...
560 - 101 = ...

980 - 199 = ...
980 - 201 = ...

750 - 51 = ...
750 - 49 = ...

740 - 99 = ...

860 - 201 = ...

Lesson (96) Subtracting 2-Digit Numbers with Regrouping 1

Outcomes

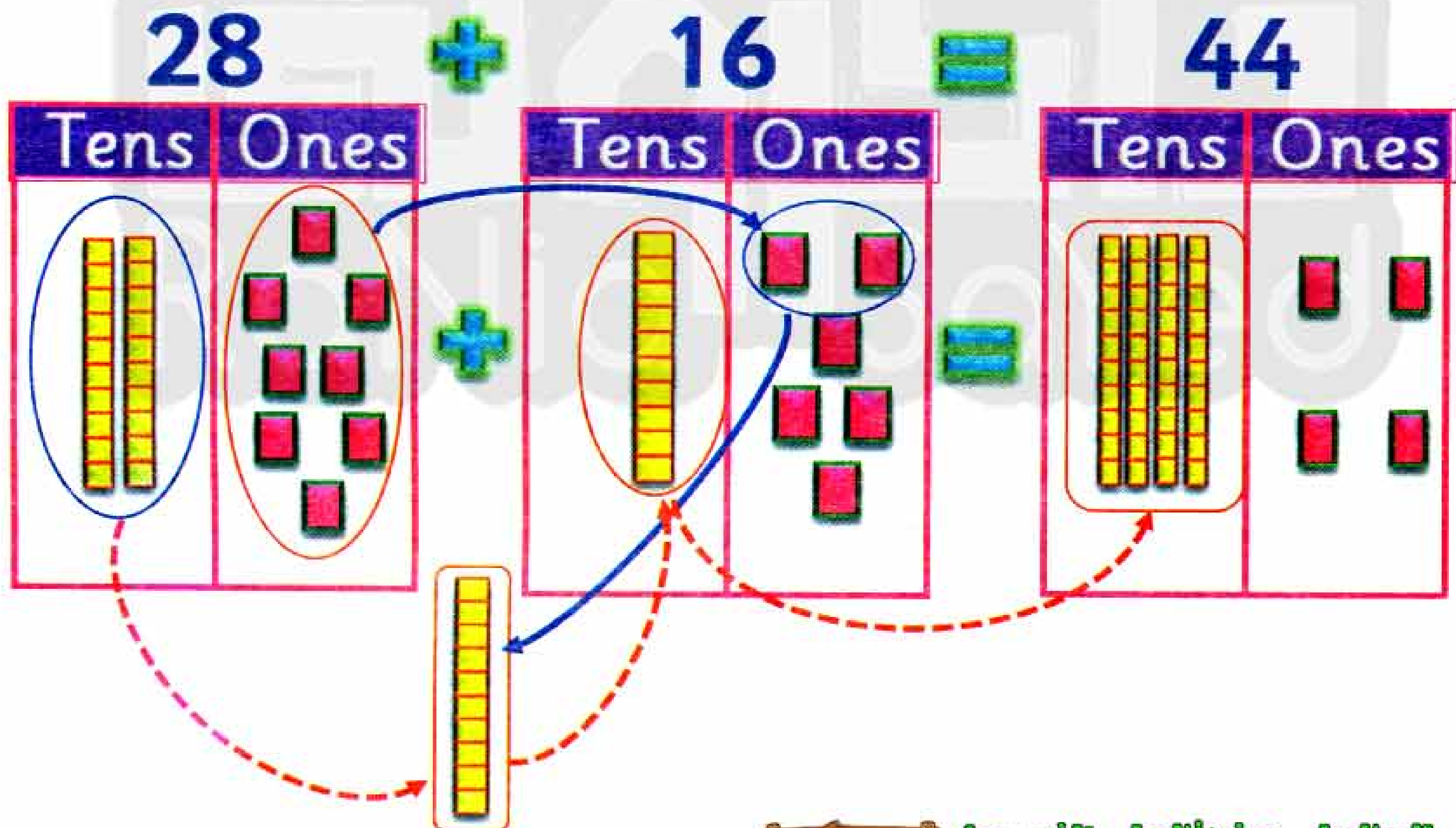
Students will:

- Participate in Calendar Math Activities.
- Use place value models to regroup and subtract.
- Subtract 2-digit numbers with regrouping.
- Define regrouping.



Regrouping means changing the way you group your Tens and Ones .

Example: **Add 28 + 16**







Try yourself

Add 34 + 8

Tens	Ones

+

Tens	Ones

=

Tens	Ones

....

Add 46 + 15

Tens	Ones

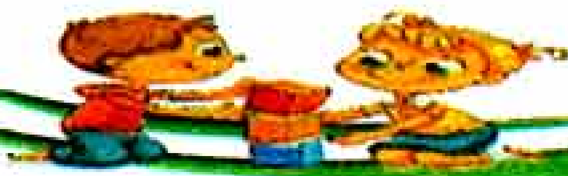
+

Tens	Ones

=

Tens	Ones

....




Complete with regrouping as the example:





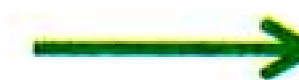










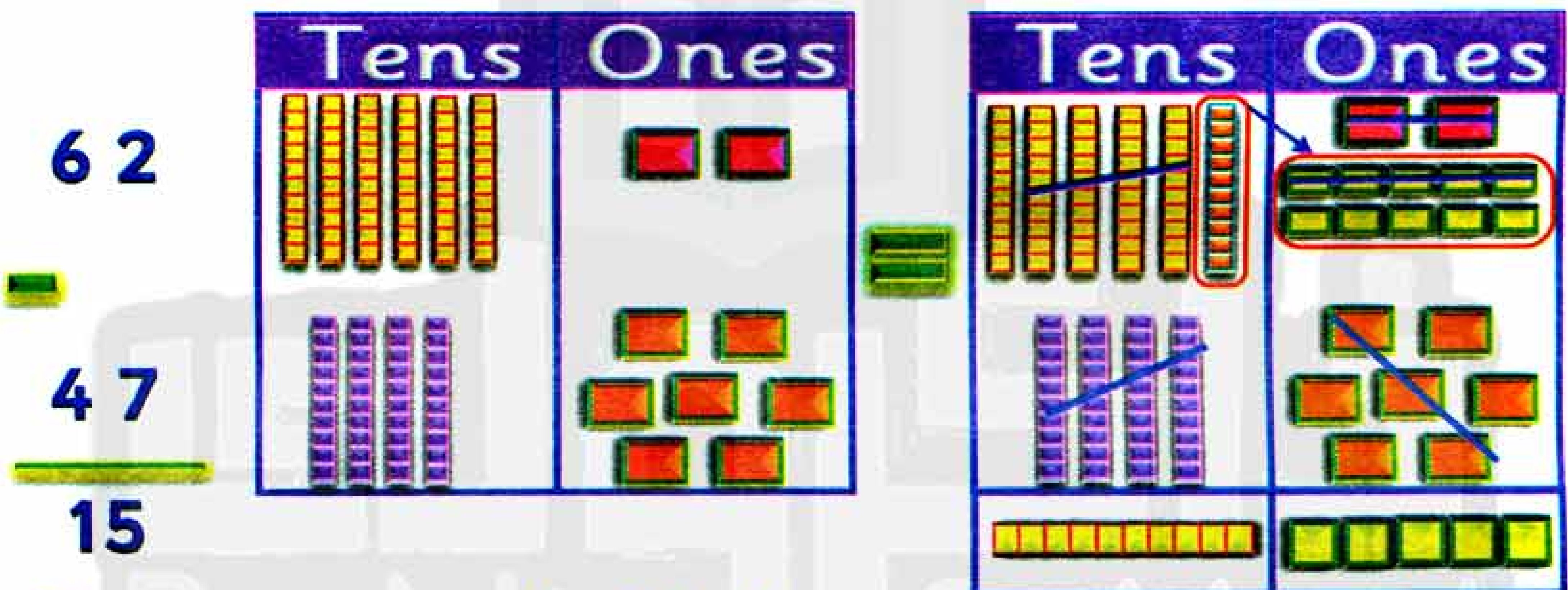






How to subtract with regrouping?

When we regroup with addition, we take 10 ones and make a new ten, but when we regroup with subtraction, we take one of our ten bundles and break it apart into 10 ones.

Example: Subtract 62 − 47



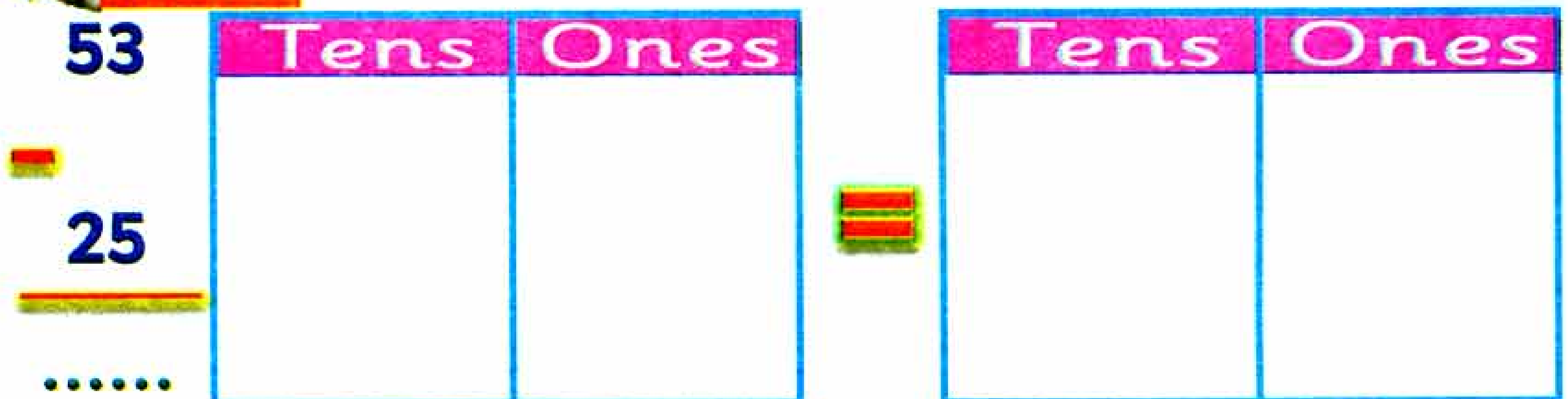
62
−
47
15

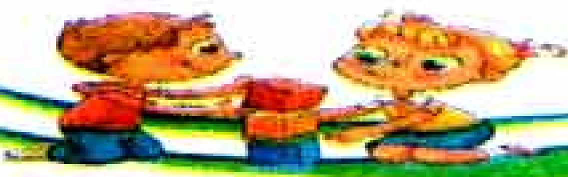
First we started with the ones, we cannot take 7 from 2, so we need to do regrouping.



Subtract 53 − 25

53
−
25
......





Subtract 56 − 19

56
−
19
......

Tens	Ones

=

Tens	Ones

Subtract 65 − 27

65
−
27
......

Tens	Ones

=

Tens	Ones

Subtract 72 − 26

72
−
26
......

Tens	Ones

=

Tens	Ones



Subtract 87 − 39

87
−
39
......

Tens	Ones

=

Tens	Ones

Subtract 43 − 26

43
−
26
......

Tens	Ones

=

Tens	Ones

Subtract 44 − 12

44
−
12
......

Tens	Ones

=

Tens	Ones



Lesson (97) Subtracting 2-Digit Numbers with Regrouping 2

Outcomes

☞ **Students will:**

- Participate in Calendar Math Activities.
- Use place value models to regroup and subtract.
- Subtract 2-digit numbers with regrouping.
- Apply strategies to estimate differences.



If we subtract (3) from (9) (as an example), we call (9) is the minuend, (3) is the subtrahend and the result of subtraction operation is the difference.

9 − 3 = 6

minuend — subtrahend — difference





Try yourself

Problem	Minuend	Subtrahend	Difference
12 − 5 = ...			
39 − 12 = ...			
147 − 47 = ...			
629 − 199 = ...			



Example:



Estimate the difference, then model using the place value mat. Record the difference, then compare the difference to your estimate.

264 - 47 = 210

260 - 50 = 210 (estimate)

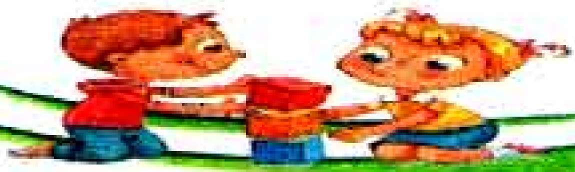
Hundreds	Tens	Ones

264
− 47
217

173 − 48 = ...

Hundreds	Tens	Ones

173
− 48
....



Activities

Subtract:

176 – 59 = ...

176
– 59
....

Hundreds	Tens	Ones

148 – 29 = ...

148
– 29
....

Hundreds	Tens	Ones

253 – 46 = ...

253
– 46
....

Hundreds	Tens	Ones



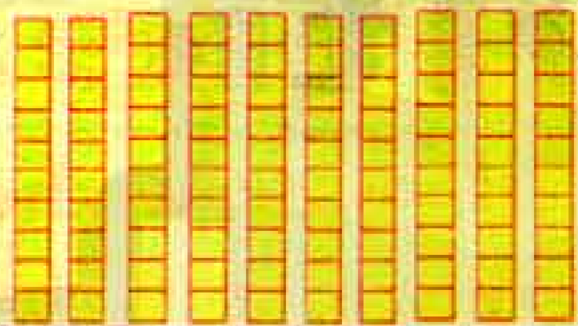
Lesson (98) Subtracting 2- and 3-digit numbers with regrouping 1

Outcomes

Students will:
- Participate in Calendar Math activities.
- Use place value models to regroup and subtract.
- Subtract 2-digit and 3-digit numbers with regrouping.
- Apply strategies to estimate differences.



1 hundred = 10 tens





100

Example: Subtract 329 - 179



We can't take 7 Tens from 2 Tens, so we need to regroup; we break one hundred apart into 10 Tens.

Hundreds	Tens	Ones



What did we do? 329 – 179 = 150

First:	We broke one hundred apart into 10 Tens.
Second:	We canceled 9 ones: 9 – 9 = 0.
Third:	We canceled 7 Tens 12 – 7 = 5.
Fourth:	We canceled 1 Tens hundreds 2 – 1 = 1.

Activities

1 Estimate the difference, then draw the problem. Subtract, write the difference, and then compare the difference to your estimation:

329 – 189 = ...

Estimation: ....

Hundreds	Tens	Ones



245 – 63 = ...

Estimation: ....

Hundreds	Tens	Ones

719 – 257 = ...

Estimation: ....

Hundreds	Tens	Ones

425 – 273 = ...

Estimation: ....

Hundreds	Tens	Ones



337 – 192 = ...

Estimation: ....

Hundreds	Tens	Ones

536 – 243 = ...

Estimation: ....

Hundreds	Tens	Ones

682 – 491 = ...

Estimation: ....

Hundreds	Tens	Ones

Lesson (99) Subtracting 2-and 3 digit numbers with regrouping 2

Outcomes

☞ Students will:
- Participate in Calendar Math Activities.
- Subtract 2 - and 3 - digit numbers with regrouping.
- Make connections between concrete and abstract Models of regrouping.
- Apply strategies to estimate differences.

Example:

Subtract 365 - 49 (Using Hundreds Tens - Ones chart)

Hundreds	Tens	Ones
- 3	6	5
	4	9

1) We can't take 9 from 5, so we are going to take 1 of the tens.

Hundreds	Tens	Ones
- 3	5 ~~6~~ 1	5
	4	9

2) We need to put that ten over to the ones place.

Hundreds	Tens	Ones
- 3	5 ~~6~~	1 5
	4	9
		6

3) Subtract 15 – 9 = 6 (Ones from one)

Hundreds	Tens	Ones
- 3	5 ~~6~~	1 5
	4	9
	1	6

4) Subtract 5 – 4 = 1 (Tens from tens)

Hundreds	Tens	Ones
- 3	5 ~~6~~	1 5
	4	9
3	1	6

5) We subtracted is 3 – 0 = 3

$$\begin{array}{r} 3\ \overset{5}{\cancel{6}}\ {}^{1}5 \\ -\quad 4\ \ 9 \\ \hline 3\ \ 1\ \ 6 \end{array}$$

(Hundreds from hundreds)



Activities

1 Subtract as the example:

Example: 472 - 356 = 116

	Hundreds	Tens	Ones
	4	~~7~~ 6	1 2
−	3	5	6
	1	1	6

423 - 217 =

	Hundreds	Tens	Ones
−			

527 - 359 =

	Hundreds	Tens	Ones
−			

623 - 343 =

	Hundreds	Tens	Ones
−			

462 -146 =

	Hundreds	Tens	Ones
−			

327 - 118 =

	Hundreds	Tens	Ones
−			



836 - 518 =

	Hundreds	Tens	Ones
−			

236 - 59 =

	Hundreds	Tens	Ones
−			

2 Subtract:

632 - 261 =

	Hundreds	Tens	Ones
−	5 ~~6~~	1 3	2
	2	6	1
	5	7	1

426 - 274 =

	Hundreds	Tens	Ones
−			

327 - 165 =

	Hundreds	Tens	Ones
−			

543 - 262 =

	Hundreds	Tens	Ones
−			

637 - 97 =

	Hundreds	Tens	Ones
−			

367 - 159 =

	Hundreds	Tens	Ones
−			

Lesson (100) Practice on addition and subtraction

Outcomes

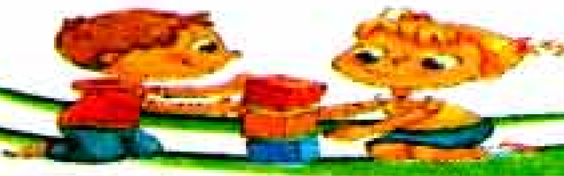
Students will:
- Participate in Calendar Math activities.
- Share 100^{th} day collections.
- Analyze their math learning over the last 100 days.

Subtract as the example:

(3)(16) 4̸ 6̸ − 27 = 19	(1)(13) 4 2̸ 3̸ − 117 = 306	(4)(13) 5̸ 3̸ 7 − 395 = 142
67 − 29 = ...	48 − 29 = ...	42 − 16 = ...
172 − 37 = ...	563 − 47 = ...	432 − 16 = ...



437 - 219 = ...	462 - 171 = ...	734 - 242 = ...	536 - 160 = ...
56 - 47 = ...	80 - 36 = ...	71 - 24 = ...	90 - 63 = ...
537 - 277 = ...	437 - 128 = ...	367 - 295 = ...	106 - 93 = ...
52 - 26 = ...	70 - 63 = ...	50 - 24 = ...	70 - 53 = ...



Activities

1 Color the problem with the same color of the result:

634 80 241 325 722 39

605 590 523

$$\begin{array}{r} 53 \\ +\ 27 \\ \hline 80 \end{array}$$

$$\begin{array}{r} 361 \\ +\ 229 \\ \hline \ldots\ldots \end{array}$$

$$\begin{array}{r} 63 \\ -\ 24 \\ \hline \ldots\ldots \end{array}$$

$$\begin{array}{r} 513 \\ +\ 92 \\ \hline \ldots\ldots \end{array}$$

$$\begin{array}{r} 532 \\ -\ 291 \\ \hline \ldots\ldots \end{array}$$

$$\begin{array}{r} 703 \\ +\ 19 \\ \hline \ldots\ldots \end{array}$$

$$\begin{array}{r} 163 \\ +\ 162 \\ \hline \ldots\ldots \end{array}$$

$$\begin{array}{r} 431 \\ +\ 92 \\ \hline \ldots\ldots \end{array}$$

$$\begin{array}{r} 763 \\ -\ 129 \\ \hline \ldots\ldots \end{array}$$



2 Solve the following problems:

47 + 35 = ...	47 + 52 = ...	435 + 56 = ...
761 − 290 = ...	473 + 231 = ...	530 − 219 = ...
171 + 52 = ...	176 − 139 = ...	314 + 216 = ...
274 − 169 = ...	371 − 27 = ...	35 + 74 = ...







Review on Chapter (4)

1 Complete:

1) If 38 + 62 = 100, So 100 – 62 = ...

2) If 621 + 243 = 864, So 864 – 621 = ...

3) If 300 - 50 = 250, So 300 – 250 = ...

4) If we start from number 93 on the number line and make 7 hops forward, we will reach number. (......................)

5) If we start from number 88 on the number line and make 9 hops backward, we will reach number. (......................)

6) If 710 - 36 = 674. So 710 – 674 = ...

7) .... =70 + 12

8) 7 + 20 + 200 = ...

9) 832 = 2 + 30 + ...

10) If 98 - 10 = 88. So 98 – 11 = ...



2 Complete using fact family:



17 + 23 = 40
.... + ... = ...
.... - .... = ...
.... - .... = ...



56 + 13 = 69
.... + ... = ...
.... - .... = ...
.... - .... = ...



40 + 27 = 67
.... + ... = ...
.... - .... = ...
.... - .... = ...



90 + 60 = 150
.... + ... = ...
.... - .... = ...
.... - .... = ...

3 Find the result using number line:

64 + 7



85 + 9



94 - 9





4 Subtract:

64 − 27 = ...	63 − 29 = ...	74 − 18 = ...	274 − 126 = ...
305 − 132 = ...	612 − 209 = ...	746 − 529 = ...	367 − 172 = ...
681 − 329 = ...	632 − 519 = ...	409 − 268 = ...	511 − 199 = ...

5 Find the sum:

97 + 39 = ...

64 + 29 = ...

276 - 127 = ...

364 - 129 = ...

567 - 392 = ...

246 + 196 = ...

371 - 325 = ...

584 - 266 = ...

319 + 199 = ...

656 - 429 = ...



6 Life problems:

1) Hind saved 295 pounds. She spent 69 pounds.
How much money left with Hind?

The money left = ...

2) 78 school boys and 109 school girls went on a school trip.
How many students went in all?

The total = ...

3) 385 passengers were on a train. 137 passengers got out in one stop.
How many passengers left on the train?

Passengers left = ...

4) The government organized a vaccination campaign for children. On the first day, 253 children were vaccinated and 129 children on the second day.
How many children vaccinated in all?

Number of children = ...

Chapter Five



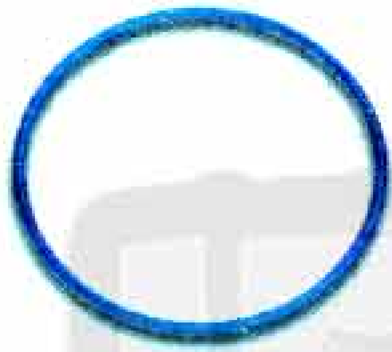
Lesson (101) Fractions 1
Half - Third and Fourth

Outcomes

Students will:
- Participate in Calendar Math activities.
- Create halves, thirds, and fourths of circles.
- Identify equal and unequal parts of a whole.

Learn:

Equal and Unequal parts



Whole circle



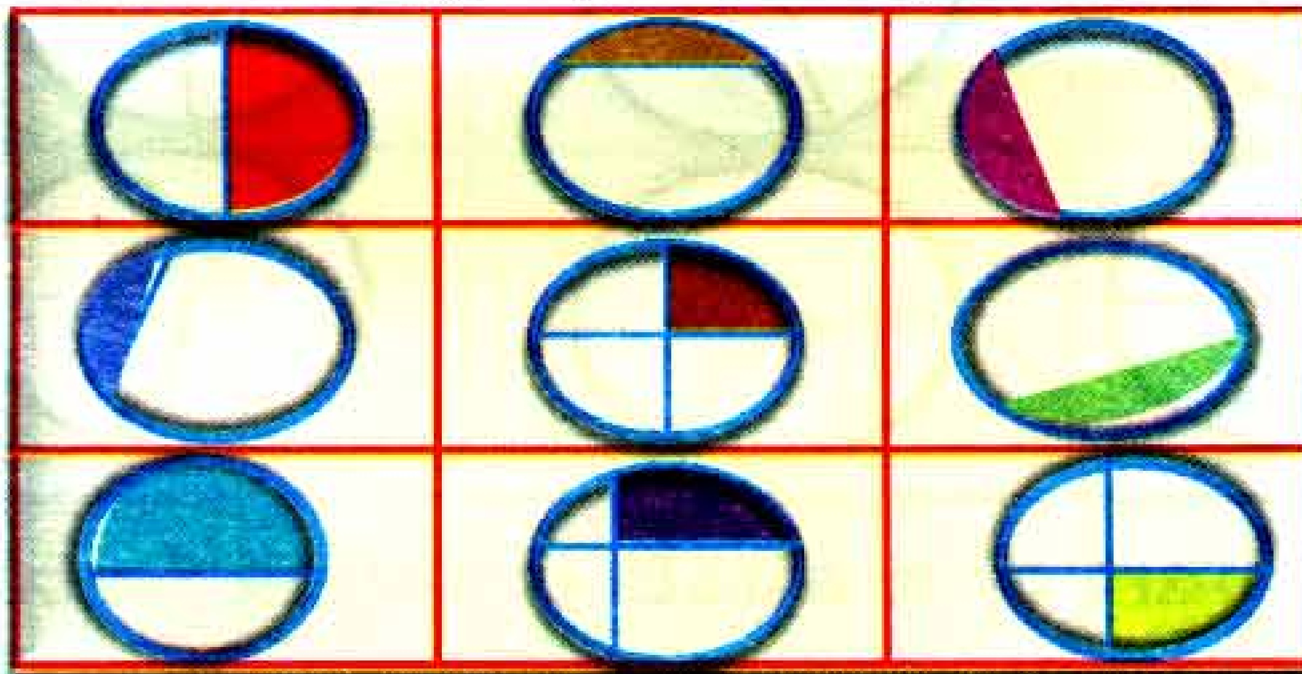
2 equal parts, The parts are the same size.



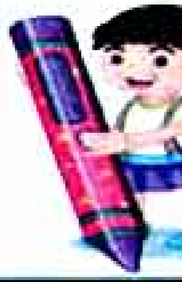
2 unequal parts, the parts are not the same size.



Circle the figures with the equal parts and cross out the figures with the unequal parts:



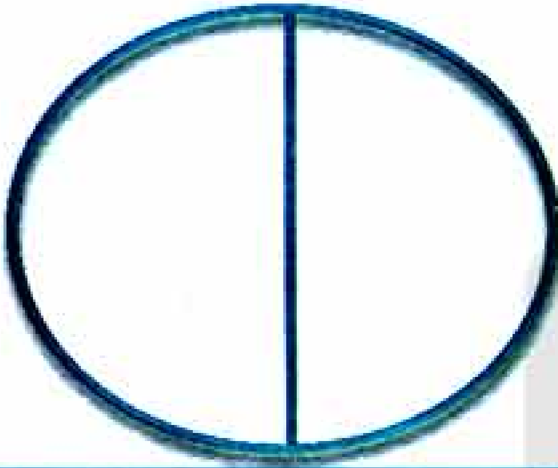




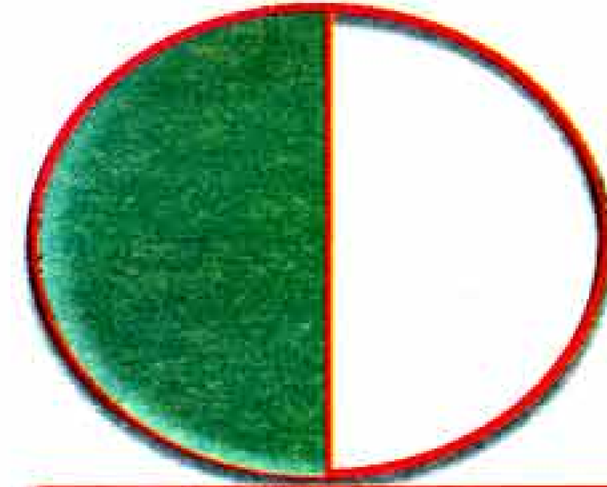
Halves



1 out of 2 equal parts shows one half.



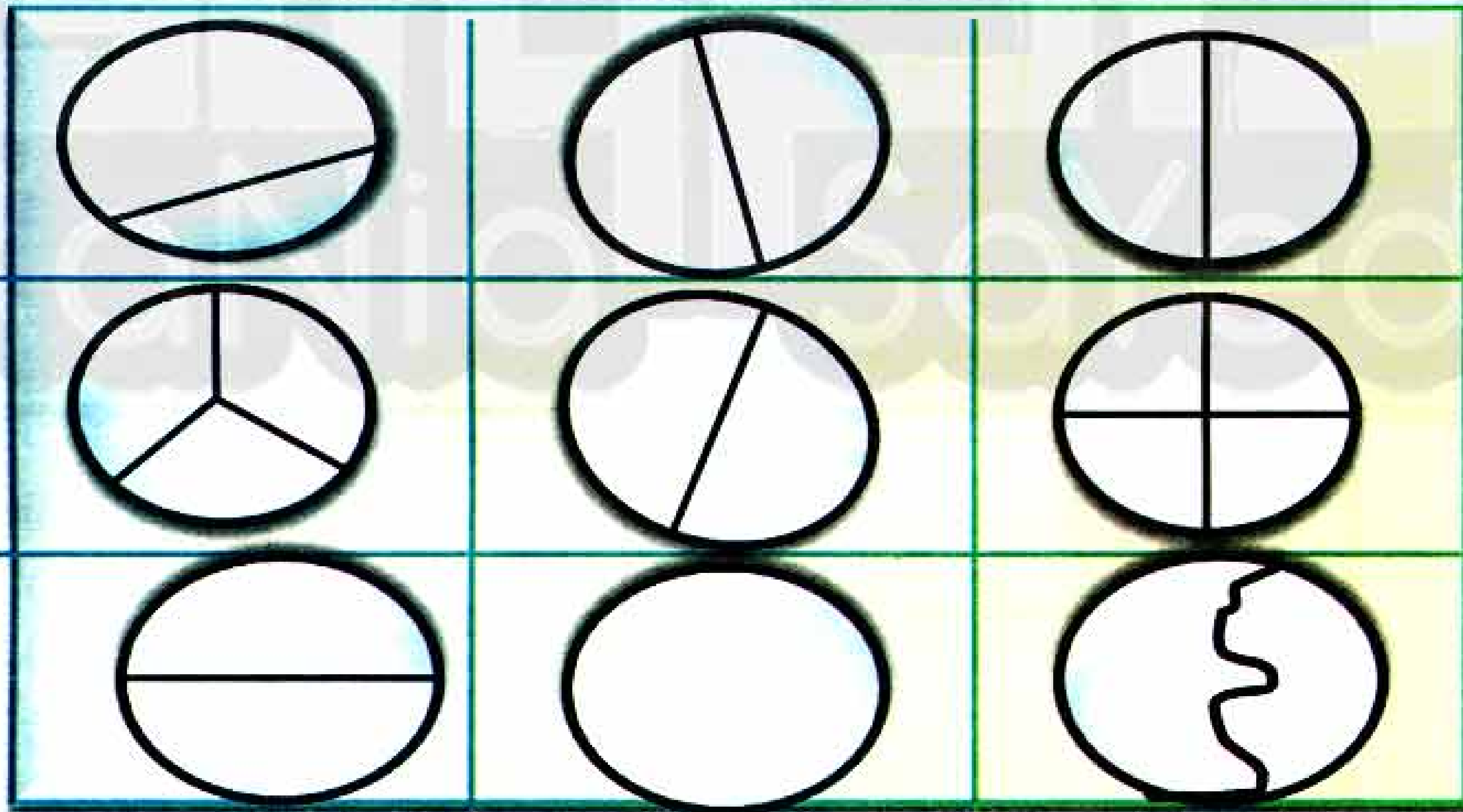
Each of 2 equal parts of a whole is a half



One half



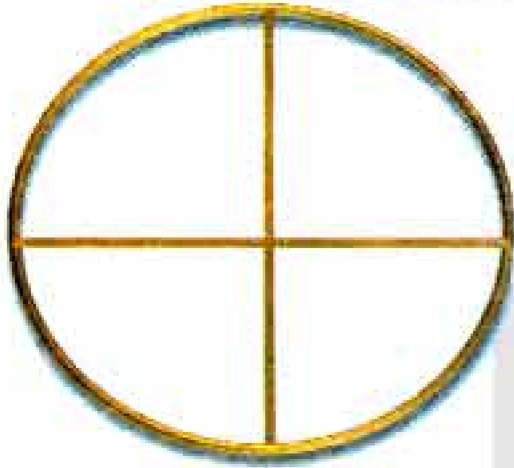
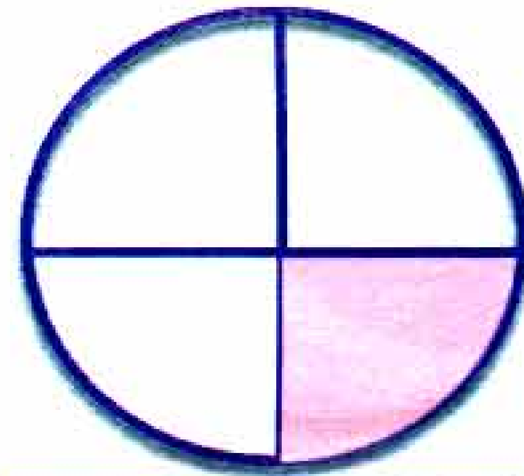
Find the figures that are divided into two equal parts, then colour the half:



Fraction: Each part of a whole is called fraction.


Fourths

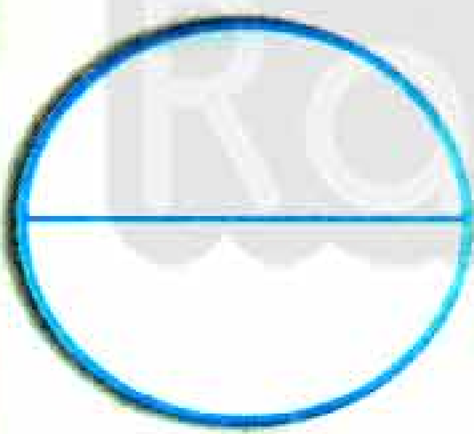

1 out of 4 equal parts shows one fourth or quarter.

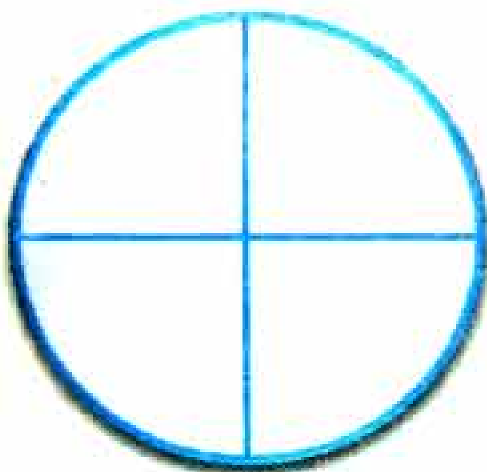
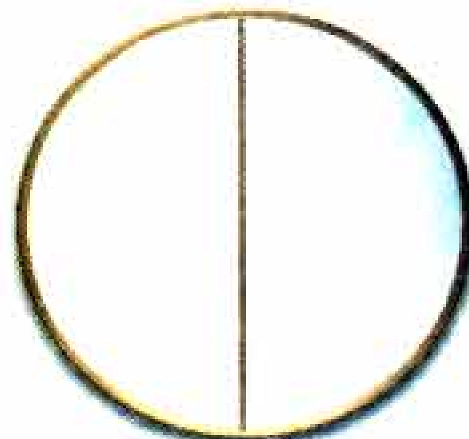



Each of 4 equal parts of a whole is a fourth.

One fourth


Find the figure that is divided into four equal parts, then colour a fourth of the figure:








Thirds



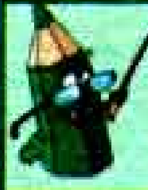
1 out of 3 equal parts shows one third.



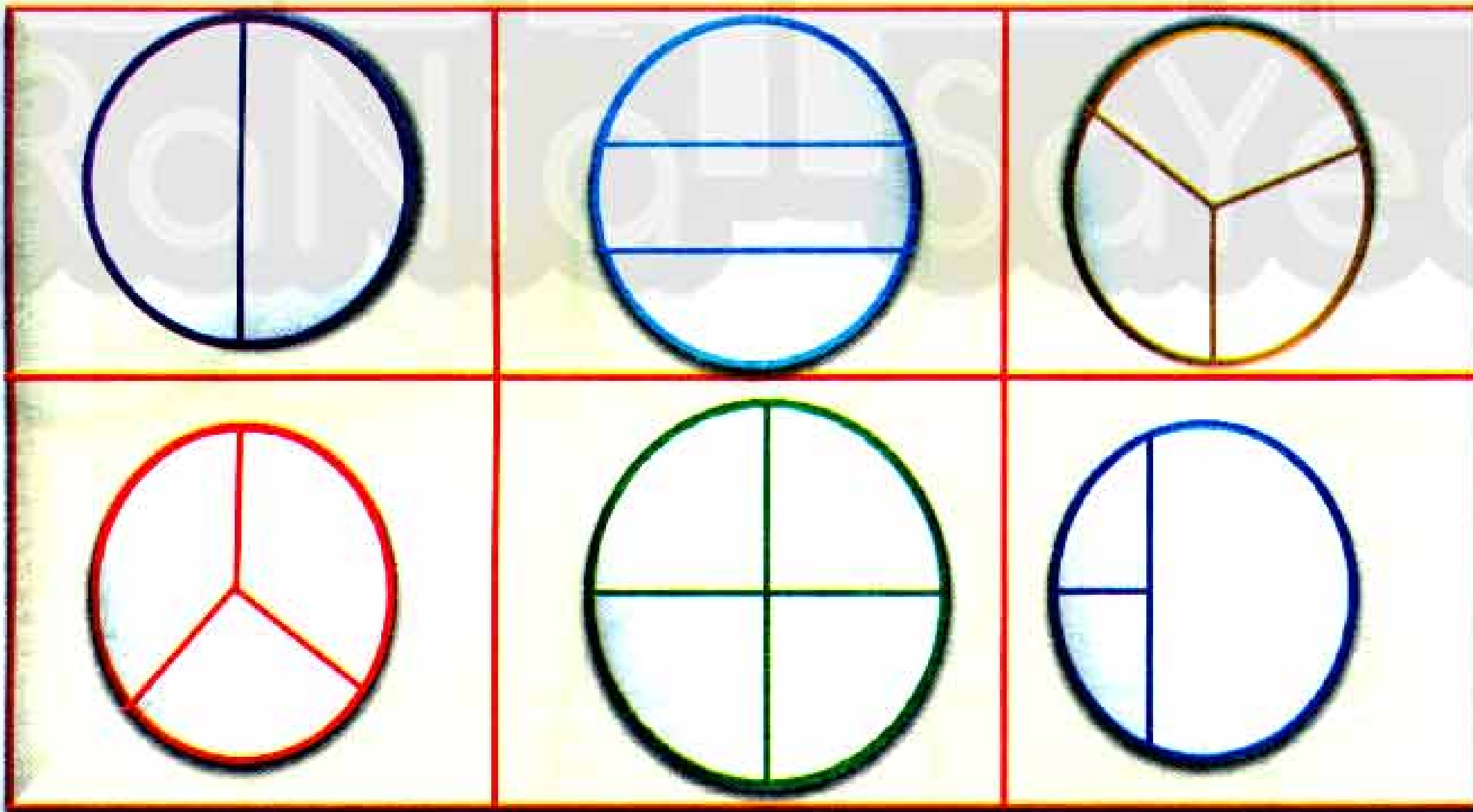


Each of 3 equal parts of a whole is a third.

One third

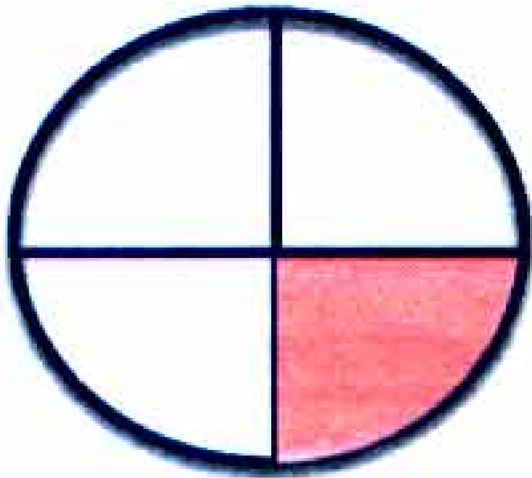


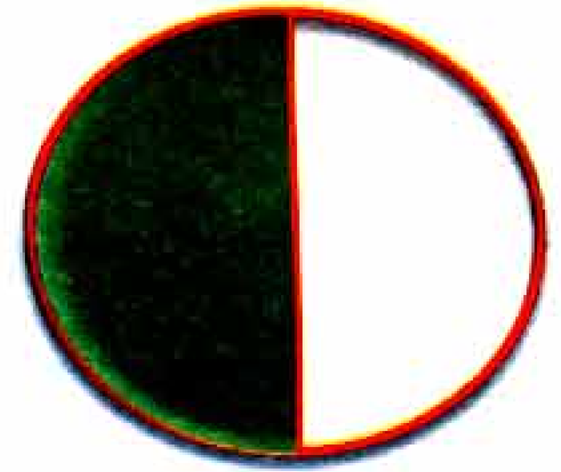
Find the figures that are divided into three equal parts, then colour a third of each figure:



Activities

1 Match the shaded part to its name:

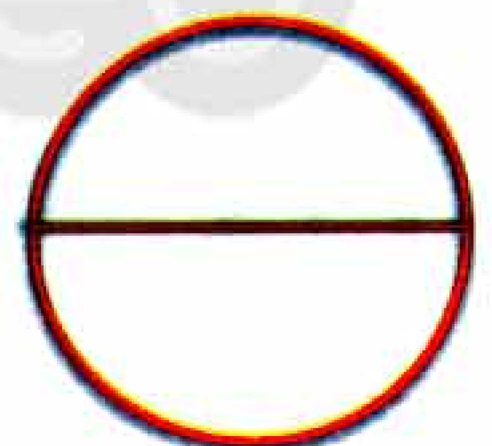




half
fourth
third

2 Colour the given part:



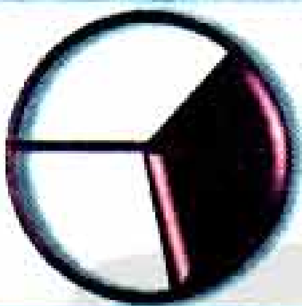
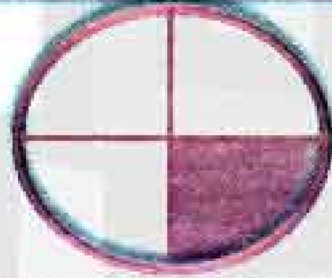
third
fourth
1 whole
half

Lesson (102) Fractions 2

Outcomes

☞ Students will:
- Participate in Calendar Math Activities.
- Use appropriate vocabulary to describe fractions.
- Investigate the attributes of halves, fourths and thirds.

Remember and learn more ($\frac{1}{2}$ / $\frac{1}{3}$ / $\frac{1}{4}$)



$\frac{1}{3}$ One third | $\frac{1}{4}$ One fourth | $\frac{1}{2}$ One half | A whole

Notice:

1 out of 2 equal parts = $\frac{1}{2}$ (one over two)

1 out of 3 equal parts = $\frac{1}{3}$ (one over three)

1 out of 4 equal parts = $\frac{1}{4}$ (one over four)

Match:

 $\frac{1}{3}$ One fourth

 $\frac{1}{4}$ One third

 $\frac{1}{2}$ One half



Numerator / Denominator

$\frac{1}{2}$

- **Numerator** ➡ is the top number of the fraction
- **Fraction bar** ➡ is a line in between the numerator and the denominator
- **Denominator** ➡ is the bottom number of the fraction

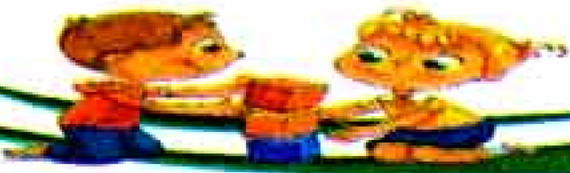
Learn:

- The numerator ➡ tells us how many parts we are focusing on.
- The denominator ➡ tells us the number of the total parts of the fraction
- In the fraction $\frac{1}{2}$,we have one part (numerator) of 2 equal parts (Denominator)

Activities

1 Write the numerator and the denominator of each fraction:

The fraction	The numerator	The denominator
$\frac{1}{2}$	....	....
$\frac{1}{3}$	....	....
$\frac{1}{4}$	....	....
$\frac{1}{5}$	....	....



2 Complete the table:

Fraction in pictures and numbers	$\frac{1}{2}$ $\frac{1}{2}$		
Number of equal parts	2	…………	…………
Fraction in words	Half Halves	…………	…………
The numerator	1	…………	…………
The denominator	2	…………	…………

3 Colour the fraction that looks like the clock:

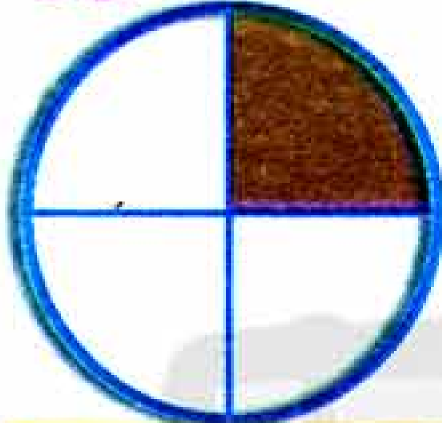
Lesson (103) Fractions 3

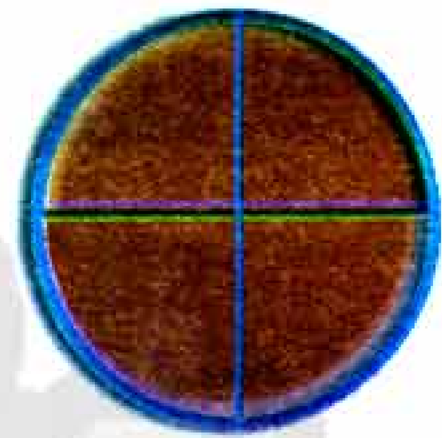
Outcomes

☞ **Students will:**

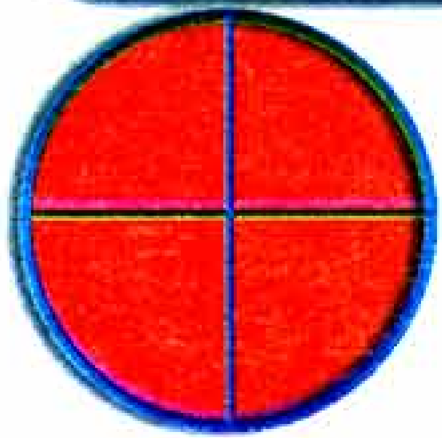
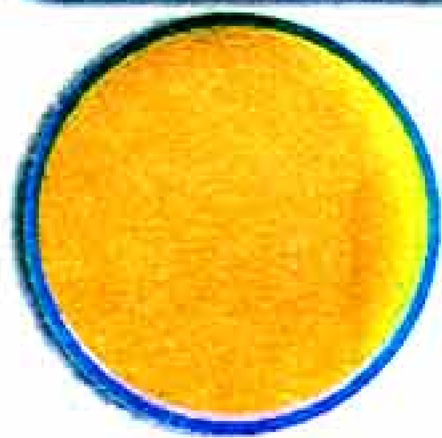
- Participate in calendar math activities.
- Investigate fractions with a numerator greater than 1.
- Make connections between images of fractions and fraction names.

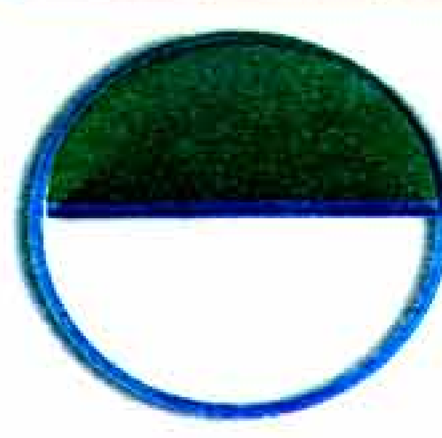
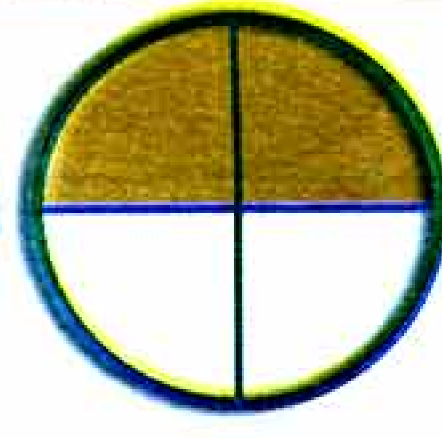




One part of four equal parts	Two parts of four equal parts	Three parts of four equal parts	Four parts of four equal parts
$\frac{1}{4}$	$\frac{2}{4}$	$\frac{3}{4}$	$\frac{4}{4}$
(One over Four)	(Two over Four)	(Three over Four)	(Four over Four)


=



=


$\frac{4}{4}$ = 1 whole

$\frac{1}{2} = \frac{2}{4}$

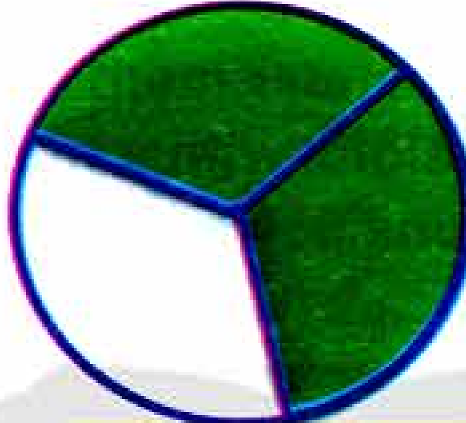


Activities

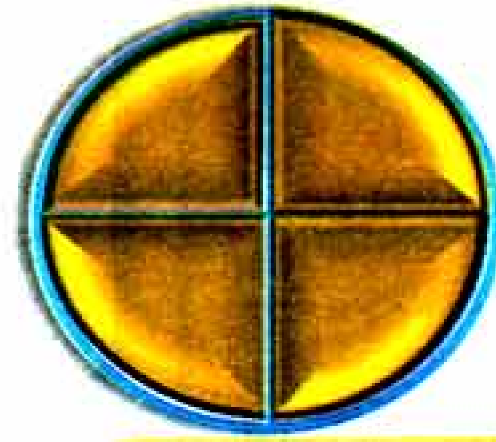
1 Complete:



.... parts of ...
equal parts
$\frac{\dots}{\dots}$
(... over ....)



.... parts of ...
equal parts
$\frac{\dots}{\dots}$
(... over ....)



.... parts of ...
equal parts
$\frac{\dots}{\dots}$
(... over ....)

 = 

$\frac{\dots}{\dots}$ = ... whole



$\frac{2}{2} = 1$



$\frac{3}{3} = 1$

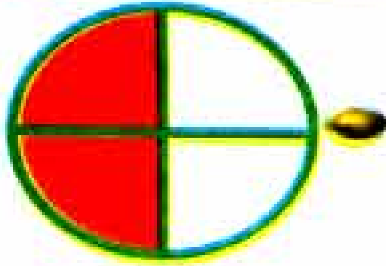


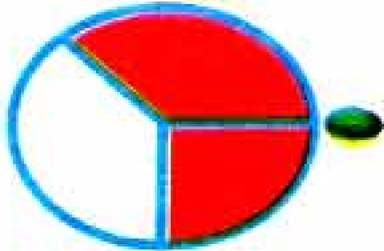
$\frac{4}{4} = 1$

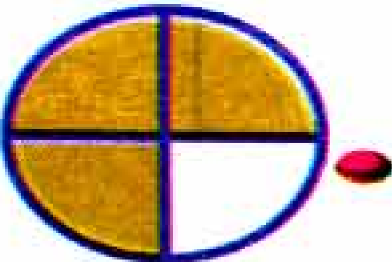
$1 = \frac{2}{2} = \frac{3}{3} = \frac{4}{4}$



2 Match:









$\frac{3}{4}$

$\frac{2}{4}$

$\frac{2}{2}$

$\frac{2}{3}$

Two Fourths

Two halves

Two thirds

Three fourths

3 Write the fraction:











.... /	.... /	.... /	.... /	.... / ....

4 Complete:

a) I am a fraction. My numerator is 2 and my denominator is 4. .... / ....

b) I am a fraction. My numerator is 1 and my denominator is 3. .... / ....



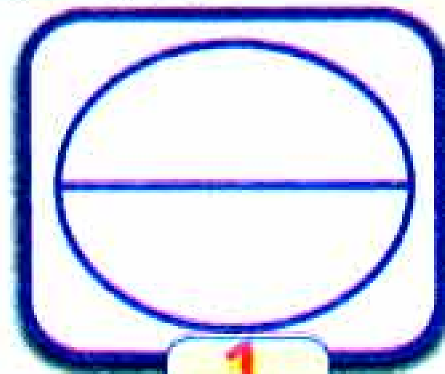
5 Colour the given fraction:



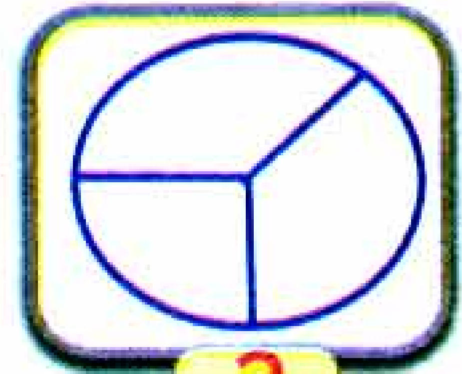
$\frac{2}{3}$



$\frac{2}{4}$



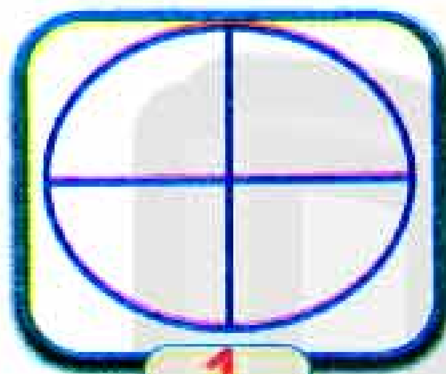
$\frac{1}{2}$



$\frac{3}{3}$



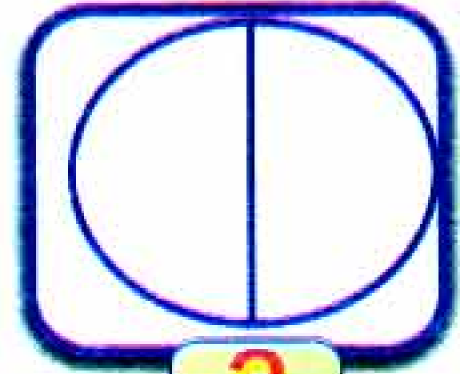
$\frac{3}{4}$



$\frac{1}{4}$



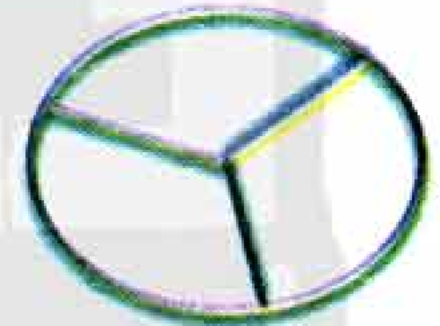
$\frac{4}{4}$



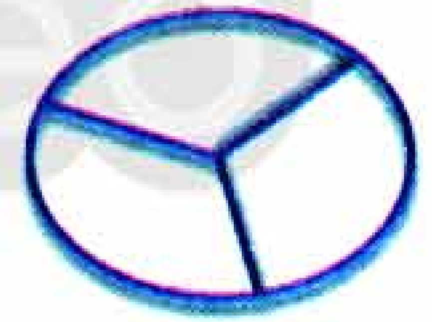
$\frac{2}{2}$

6 Follow the directions below then complete:

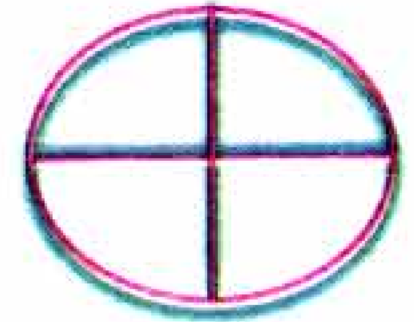
1) Shade one part of the circle,
then write the fraction $\frac{\dots}{\dots}$



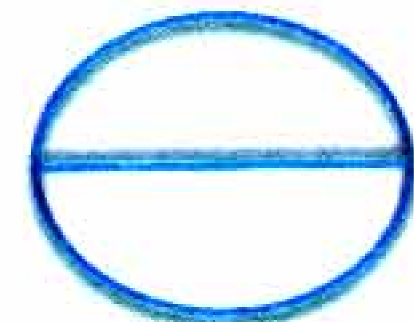
2) Shade two-parts of the circle,
then write the fraction $\frac{\dots}{\dots}$



3) Shade two-parts of the circle,
then write the fraction $\frac{\dots}{\dots}$



4) Shade one part of the circle,
then write the fraction $\frac{\dots}{\dots}$



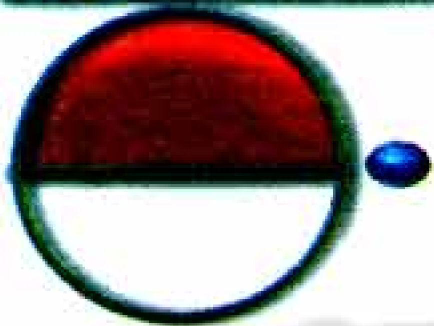
Lesson (104) Fractions 4

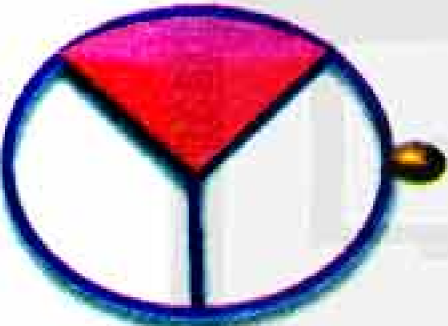
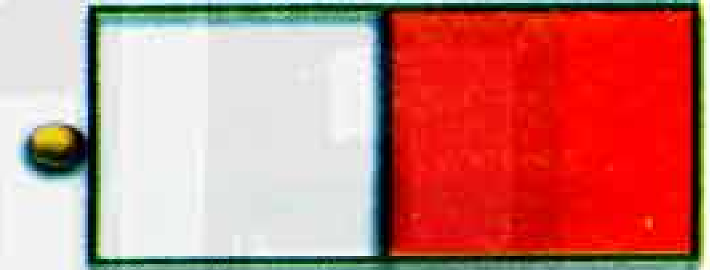
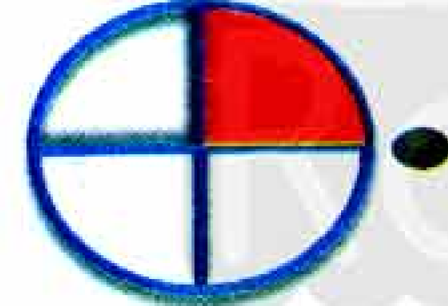
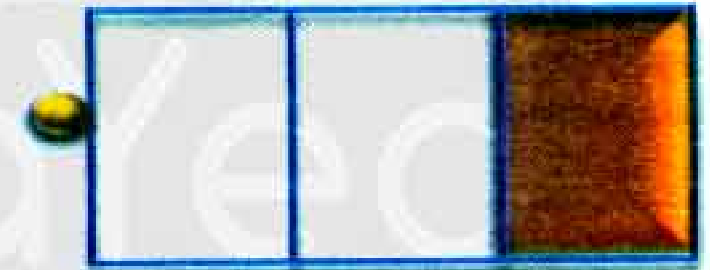
Outcomes

☞ **Students will:**

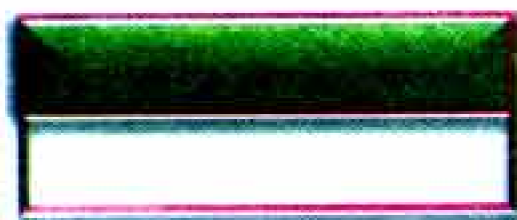
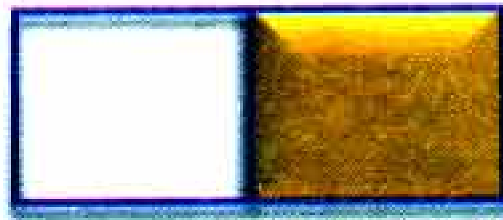
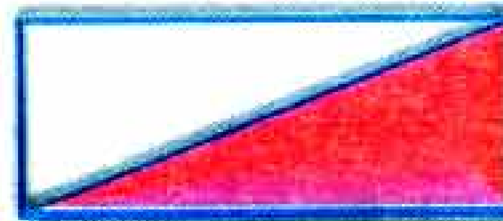
- Participate in Calendar Math activities.
- Identify multiple ways to divide a rectangle into fractional parts.
- Make connections between images of fractions and fraction names.

1 Match the similar fractions:



(Halves)

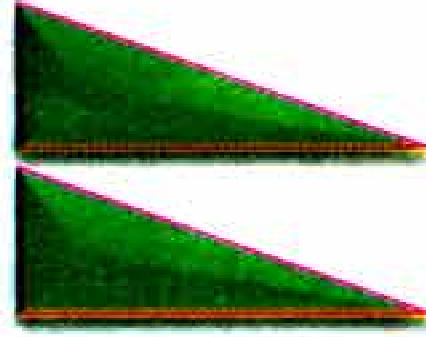




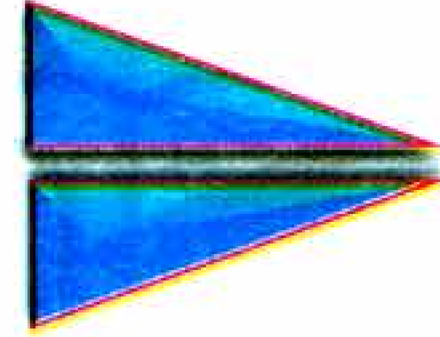

Each part of the previous shapes is one of two equal parts, each one represents $\frac{1}{2}$



Note The two pieces are not mirror images of one another but if we cut the pieces out, we will be able to fit them together.

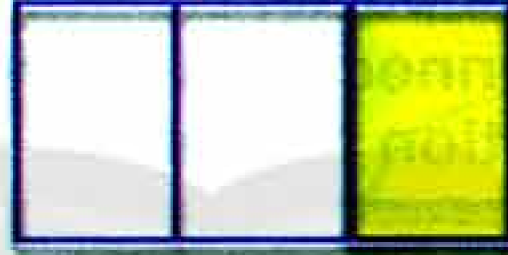






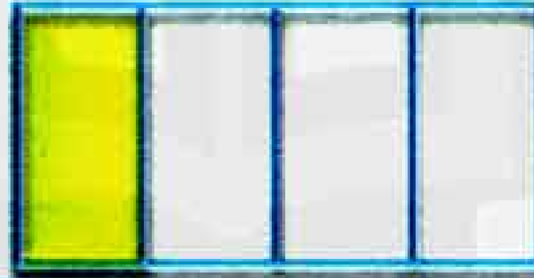
(Thirds)





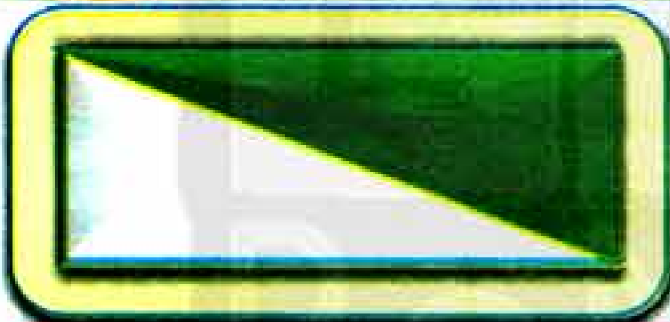
(Fourths)

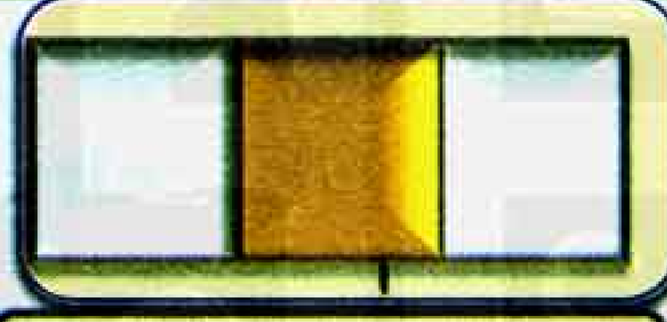


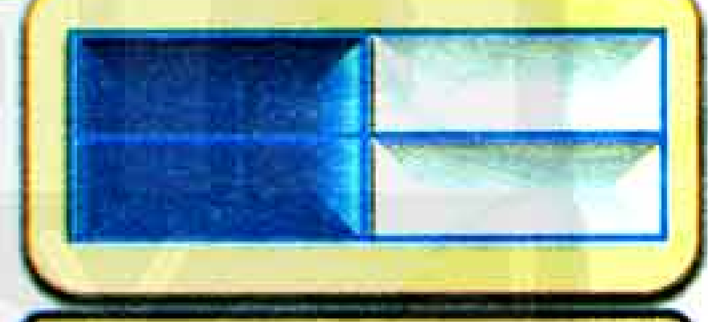


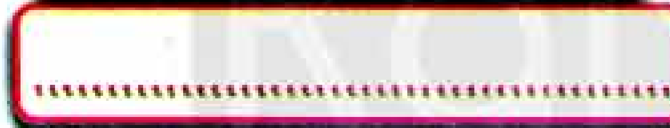


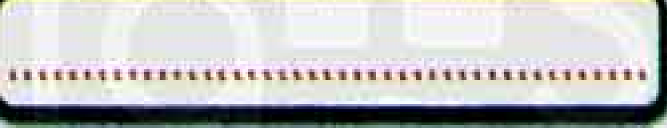
2 Write the name of each fraction:

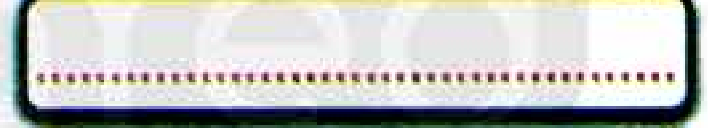


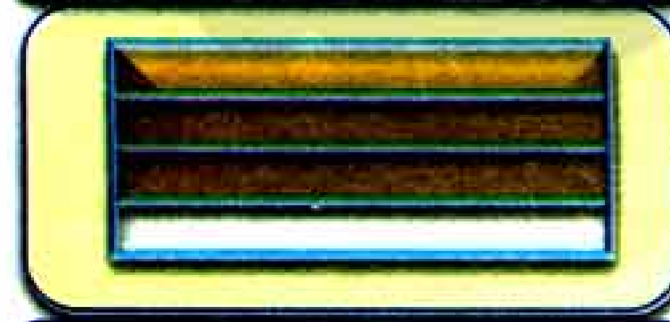


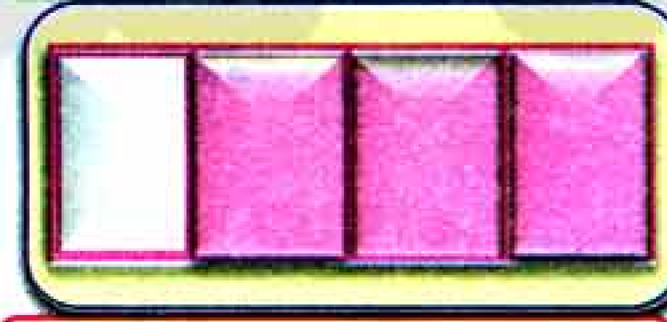


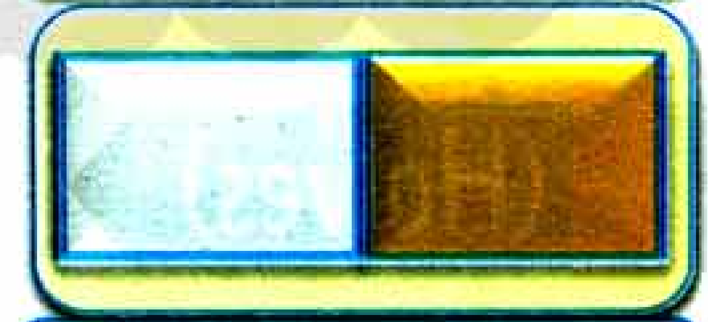


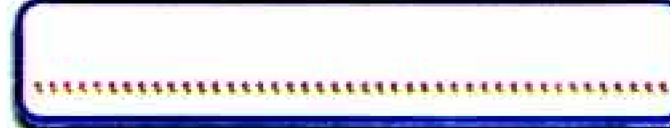


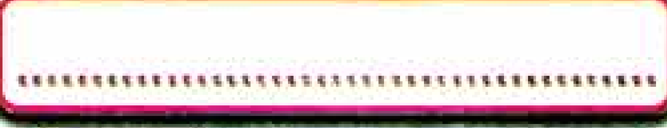


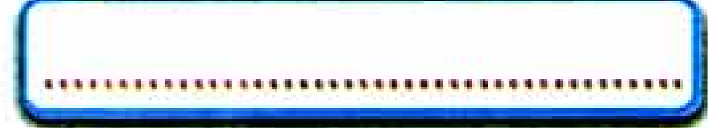




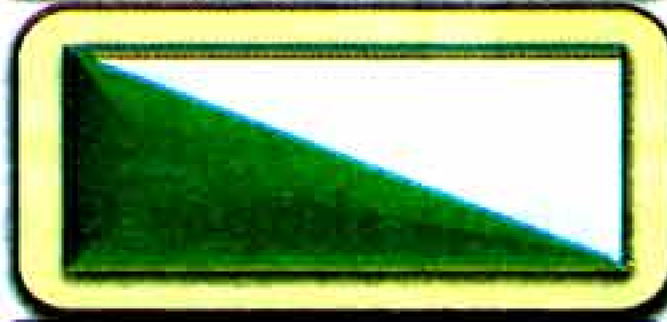


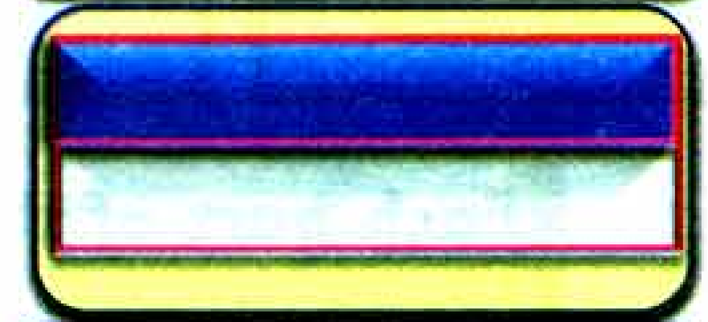








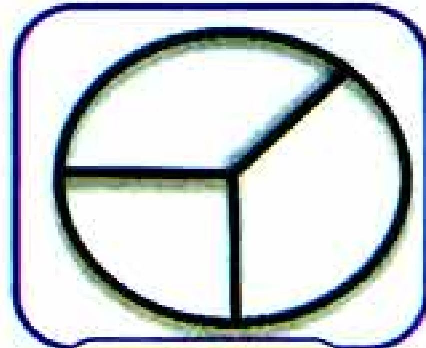




....



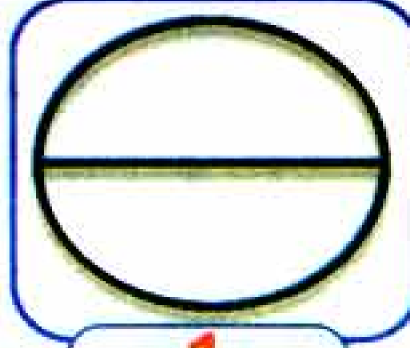
3 Colour the given fraction:



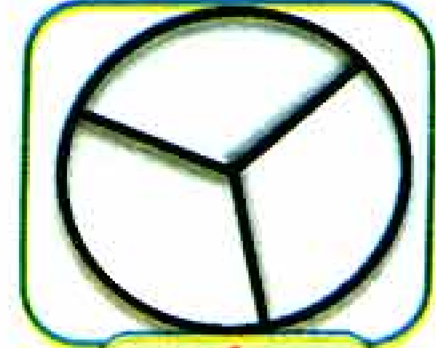
$\frac{2}{3}$



$\frac{3}{4}$



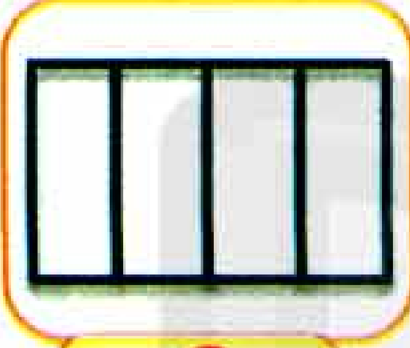
$\frac{1}{2}$



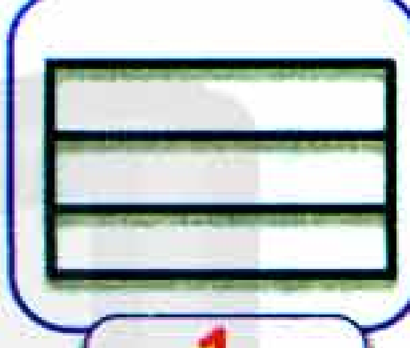
$\frac{1}{3}$



$\frac{1}{4}$



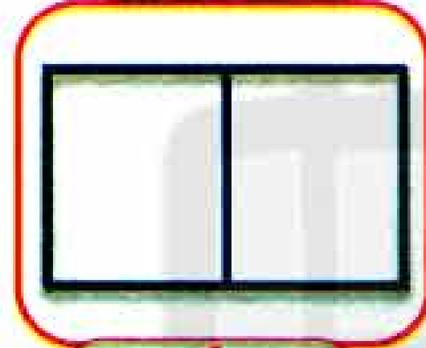
$\frac{2}{4}$



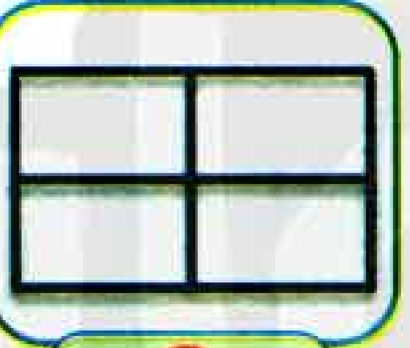
$\frac{1}{3}$



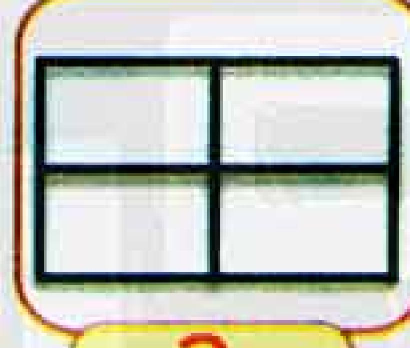
$\frac{1}{2}$



$\frac{1}{2}$



$\frac{2}{4}$



$\frac{3}{4}$



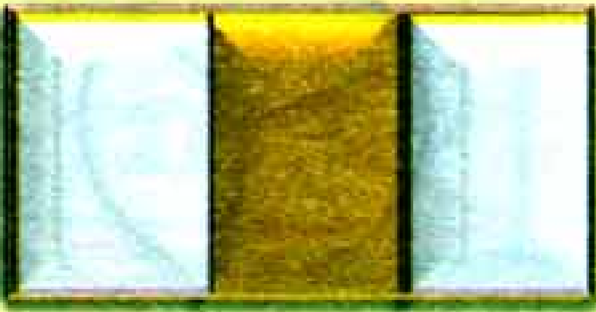
$\frac{2}{4}$

4 Colour, and learn:

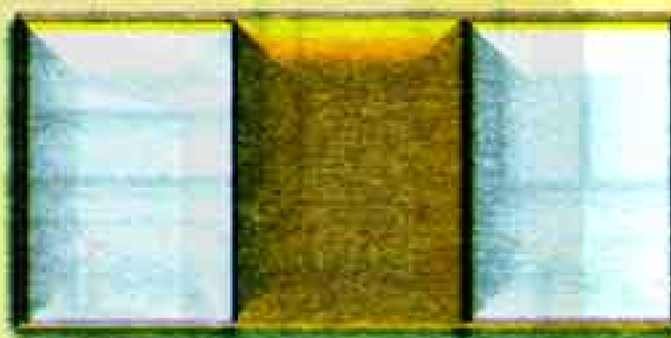
- The one whole in brown 
- The halves in green 
- The thirds in yellow 
- The fourths in blue 



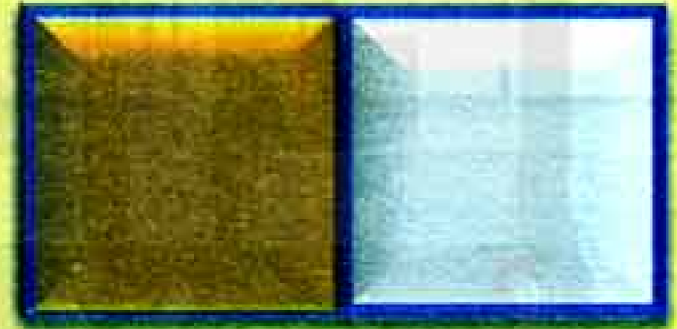
5 Cross the odd fraction out:

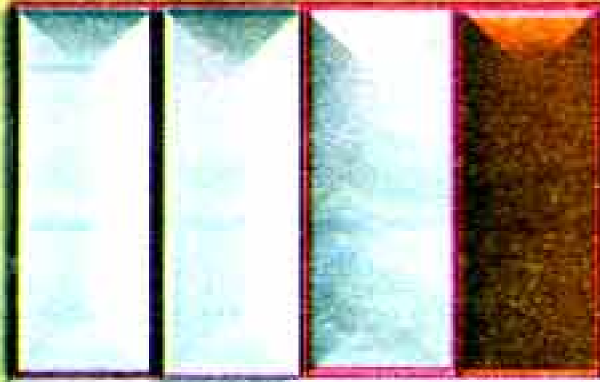
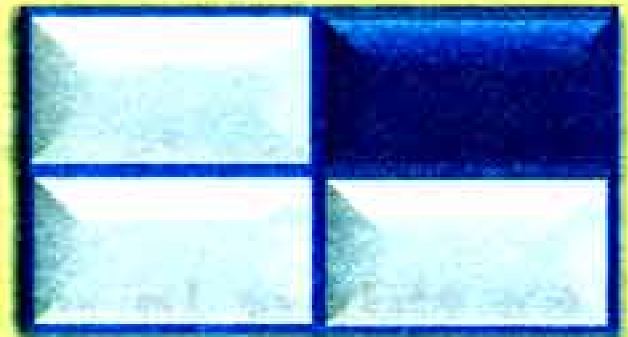






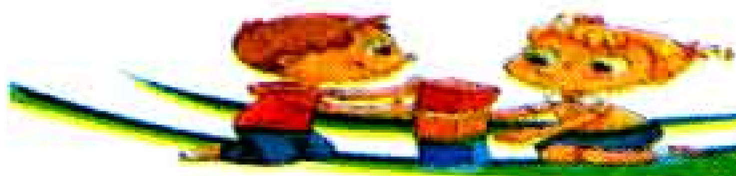




Lesson (105) Fractions 5

Outcomes

☞ Students will:
- Participate in Calendar Math activities.
- Create fractions using word or number clues.

1 Colour the same fractions with the same color:



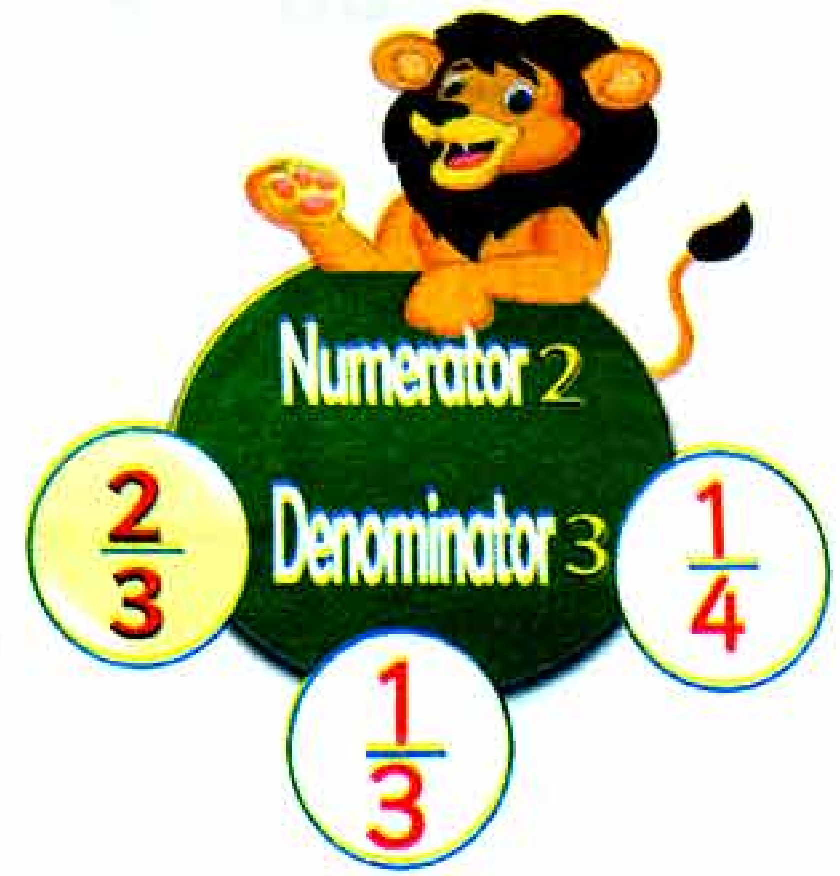
2 Complete the table as the example:

The numerator	The denominator	The fraction	The figure
1	2	$\frac{1}{2}$	
2	3	$\frac{.......}{.......}$	
....	....	$\frac{3}{4}$	
....	....	$\frac{.......}{.......}$	
2	....	$\frac{.......}{2}$	
....	....	$\frac{.......}{.......}$	
....	4	$\frac{1}{.......}$	



3 Colour the same fractions with the same color:















Lesson (106) Fractions 6

Outcomes

Students will:

- Participate in Calendar Math activities.
- Identify numbers as even or odd.
- Name all fractional parts for halves, thirds, and fourths.

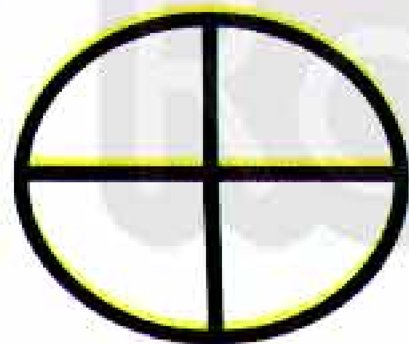
1 Colour as the given fraction:

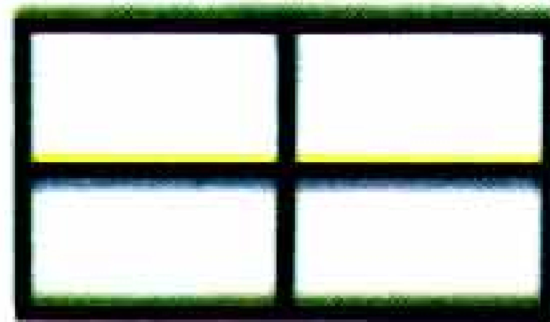
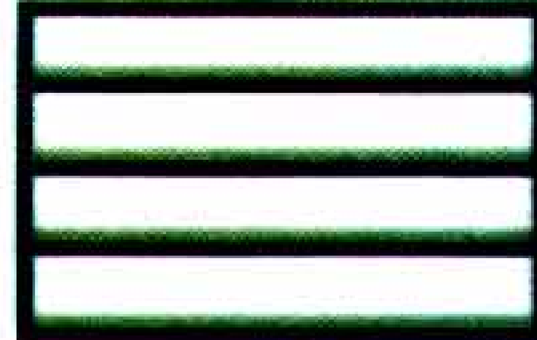
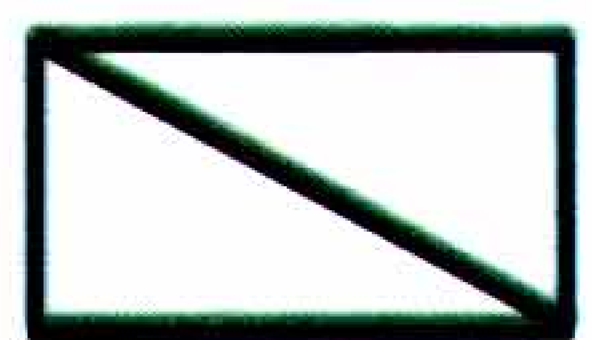


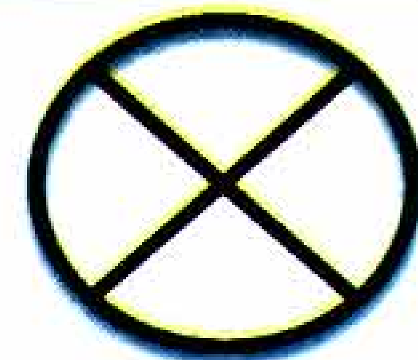
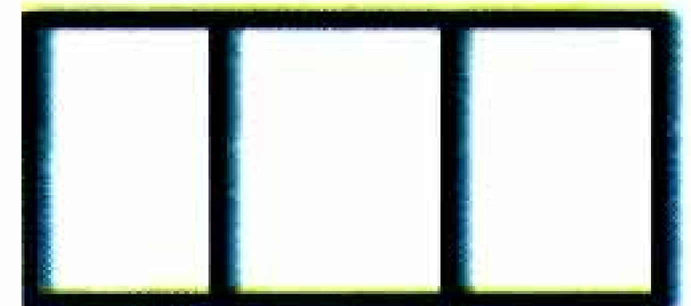






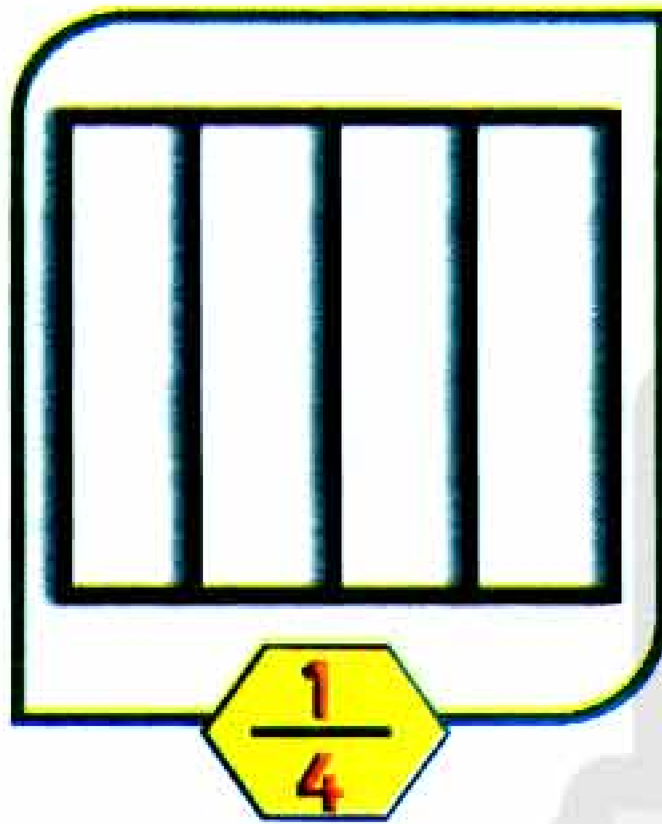





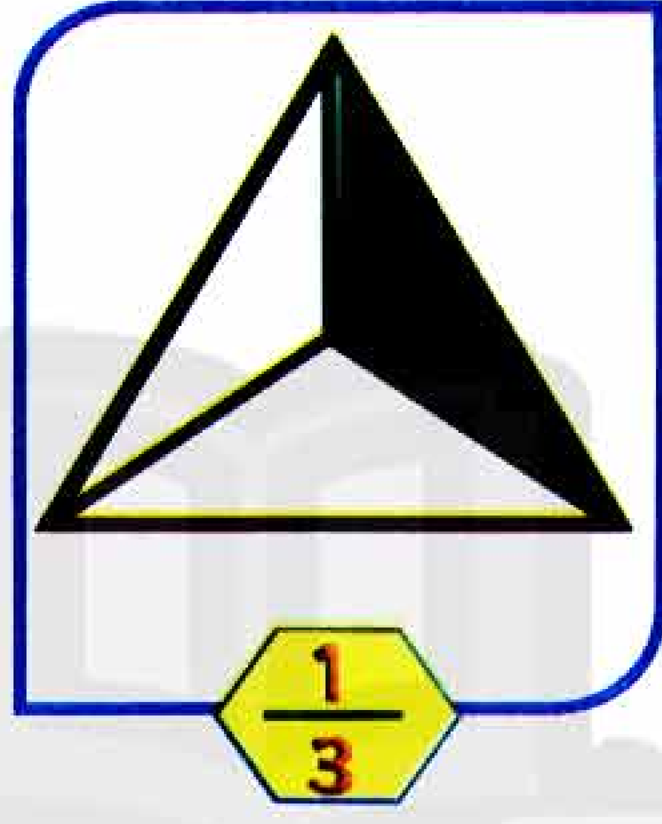



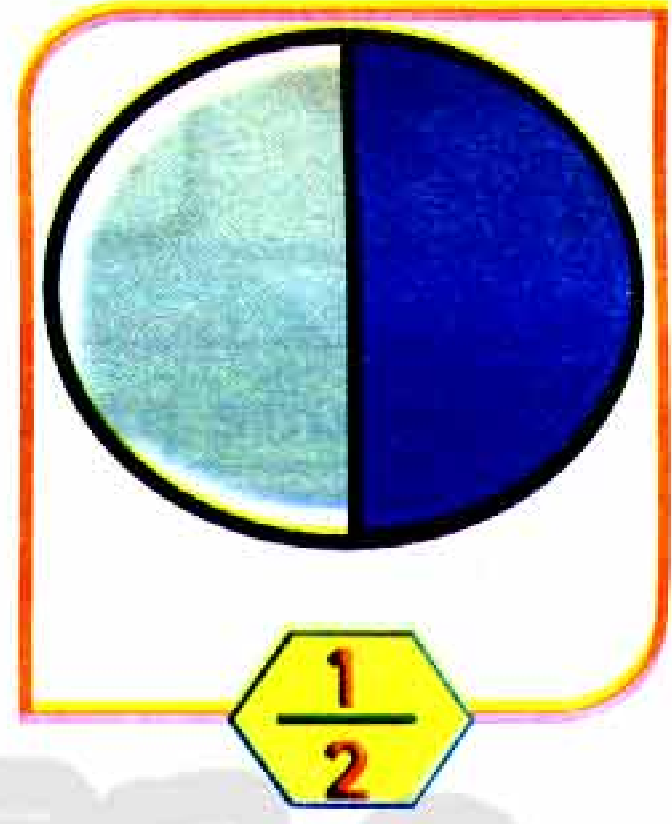


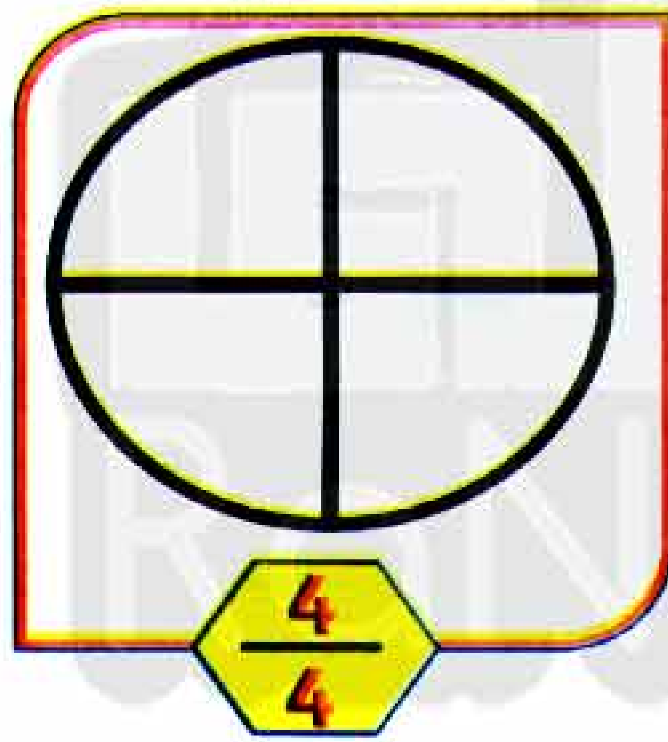


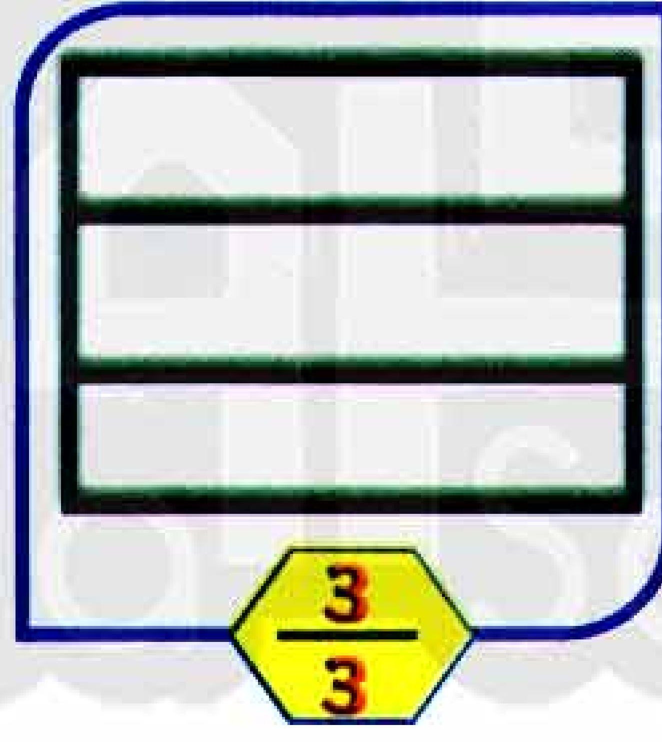
Colour the parts that represents the denominator in **green** if it is an odd number, and colour the numerator in **blue** if it is an even umber:

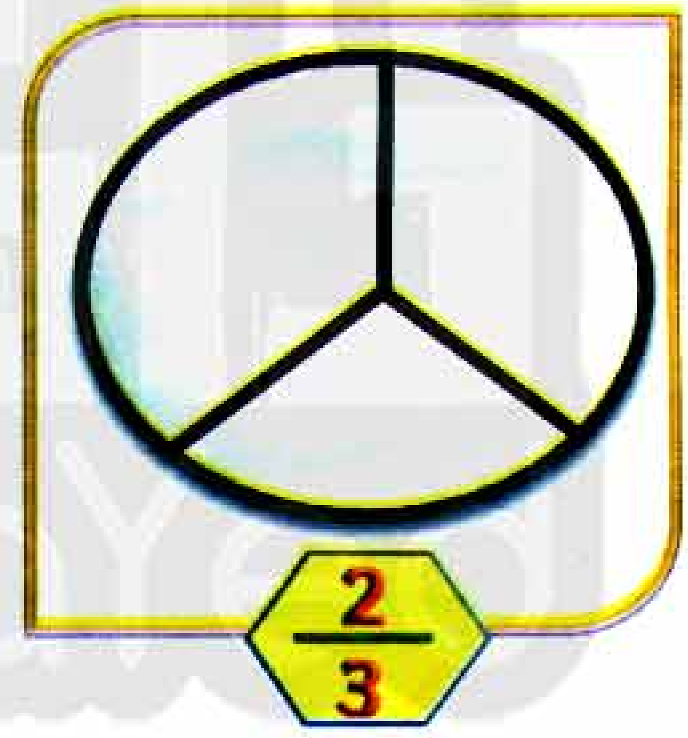


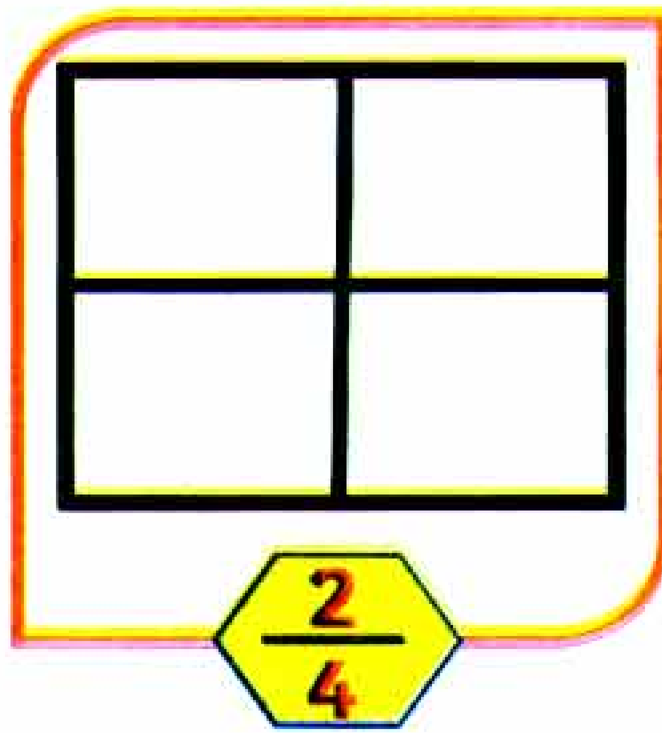


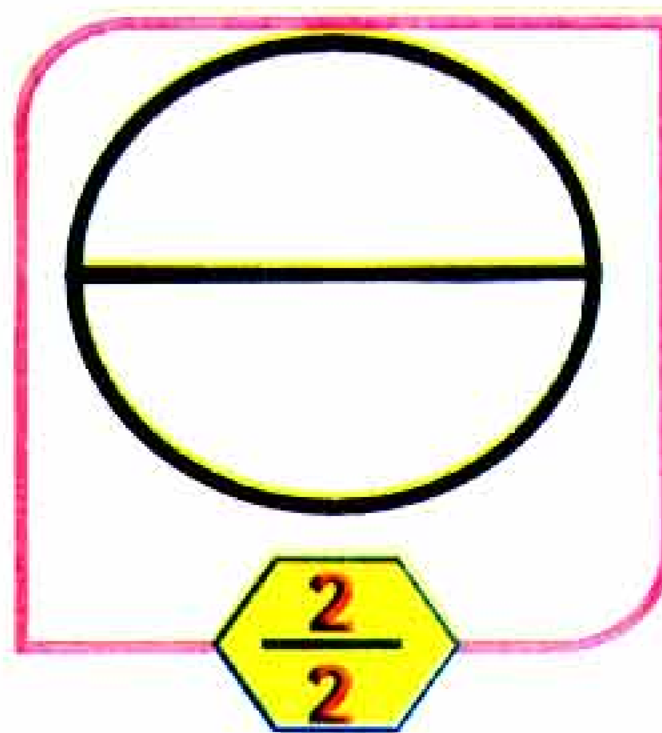


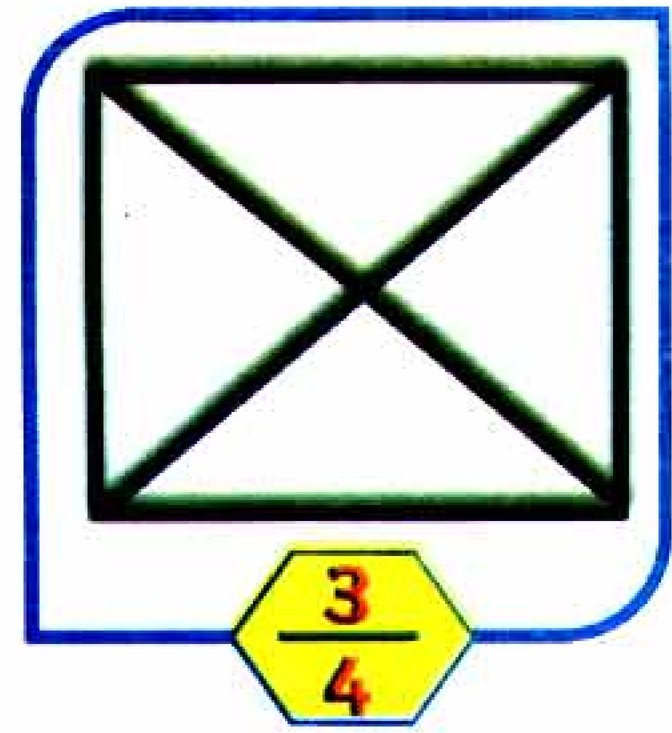












Lesson (107) Fractional parts of a set 1

Outcomes

Students will:

- Participate in Calendar Math activities.
- Identify and write fractional parts of a set.
- Compare fractions of a whole and of a set.

Learn:



You can name parts of a group with a fraction

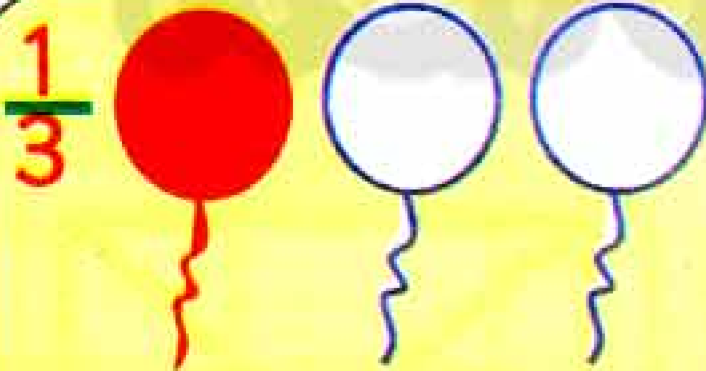


$\frac{1}{4}$ of the ⛵ is red

Activities

1 Use (red) color to show each fraction and complete the sentence:

$\frac{1}{3}$



1 out of the 3 is red.

$\frac{1}{3}$ of the 🎈 is red.

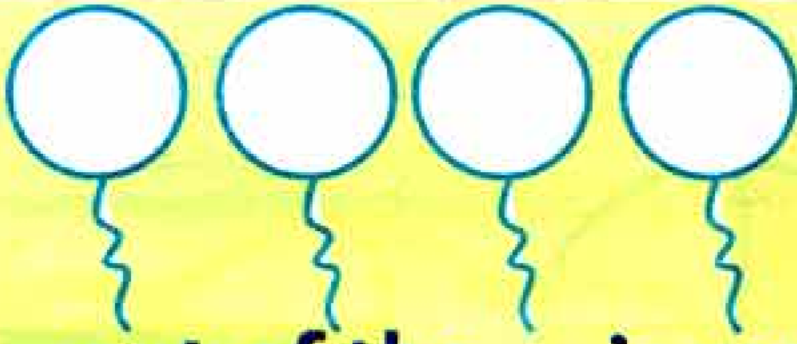
$\frac{1}{2}$



... out of the.... is red.

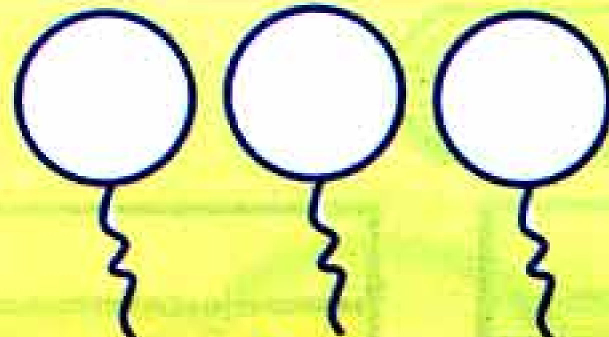
... of the 🎈 is red.



$\frac{1}{4}$ 

... out of the.... is red

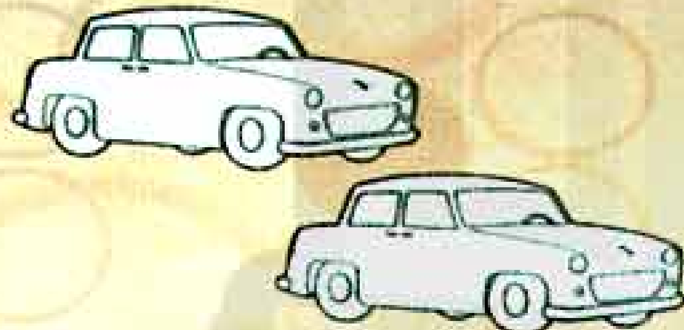
... of the ◯ is red

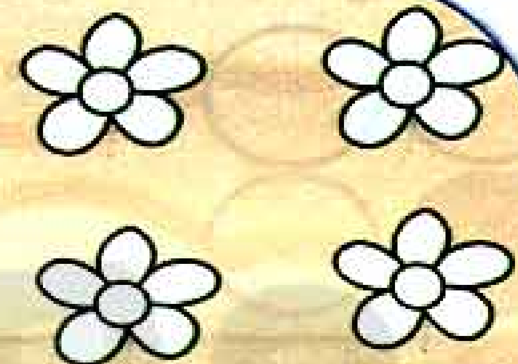
$\frac{1}{3}$ 

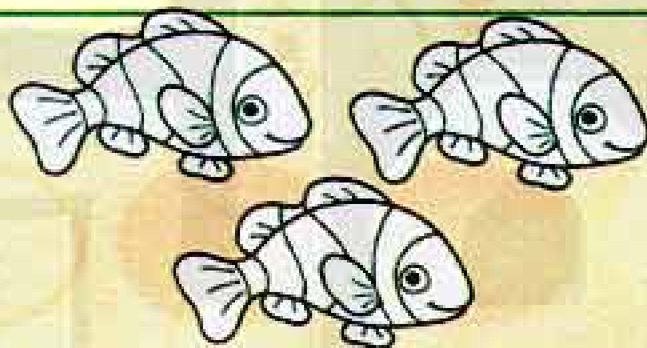
... out of the.... is red

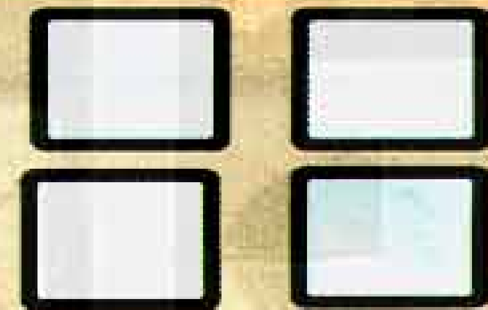
... of the ◯ is red

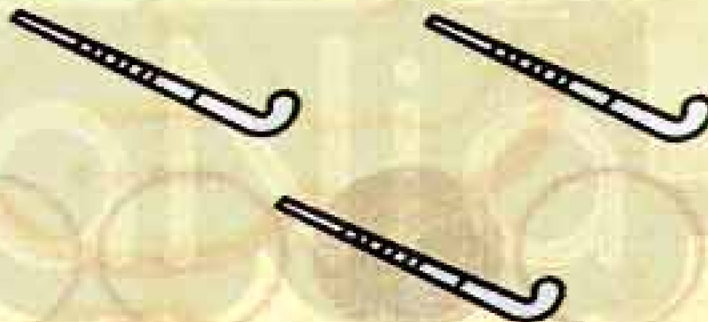
2 Use color to show each fraction:

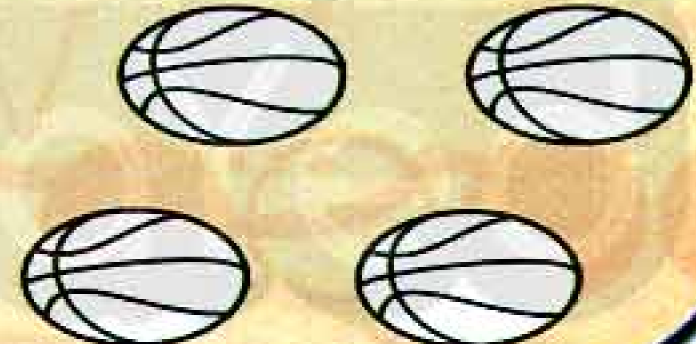
$\frac{1}{2}$ 

$\frac{1}{4}$ 

$\frac{1}{3}$ 

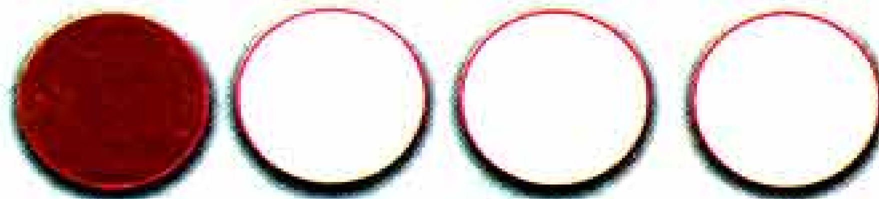
$\frac{2}{4}$ 

$\frac{2}{3}$ 

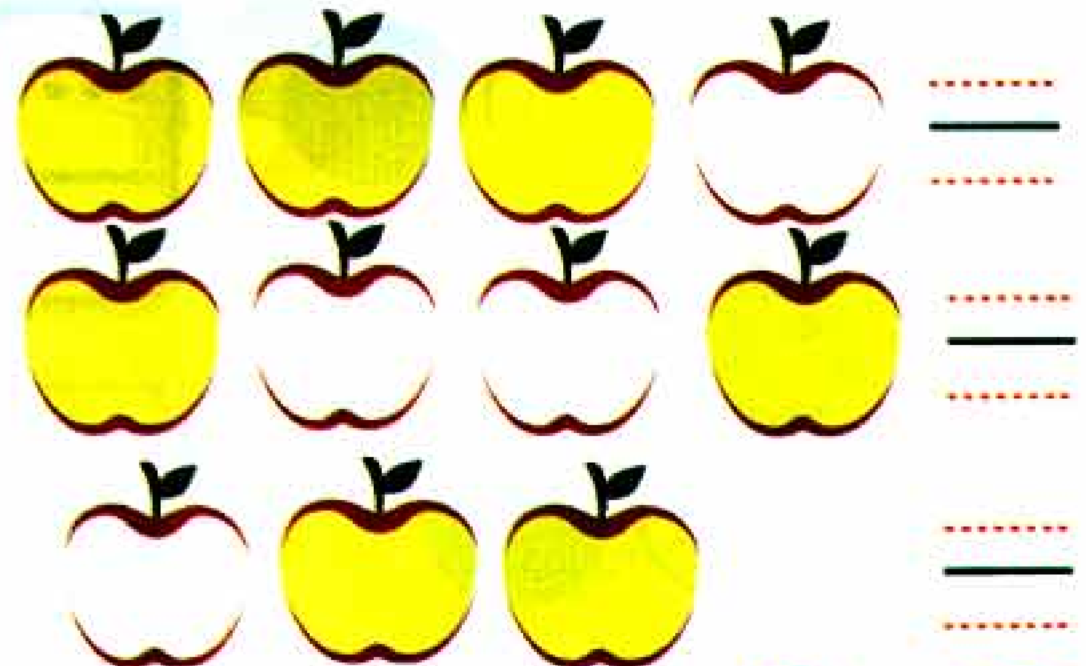
$\frac{3}{4}$ 

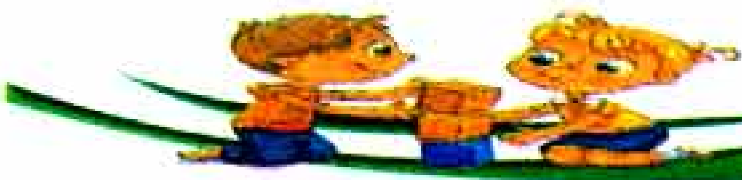
3 Write the fraction:



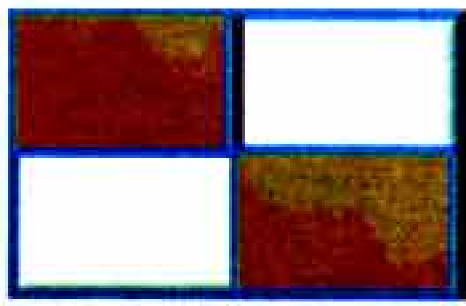
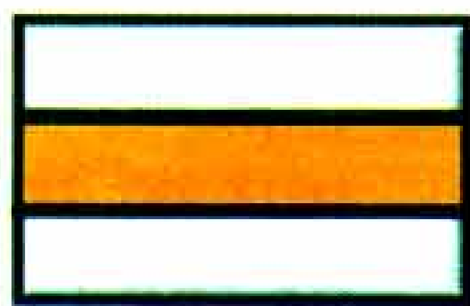
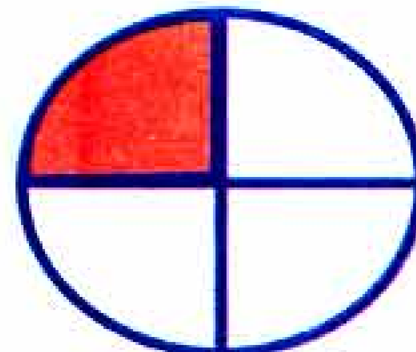
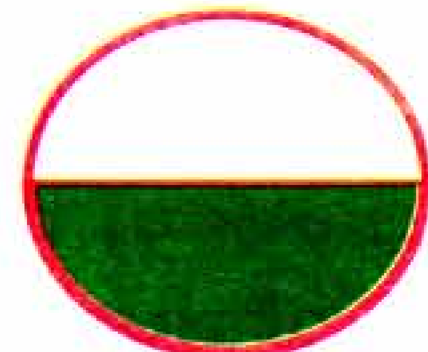








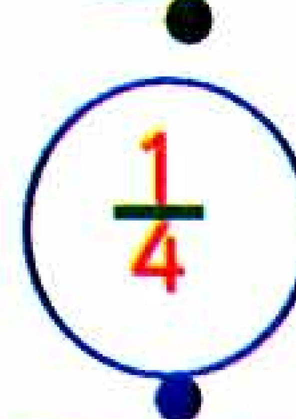
4 Match:

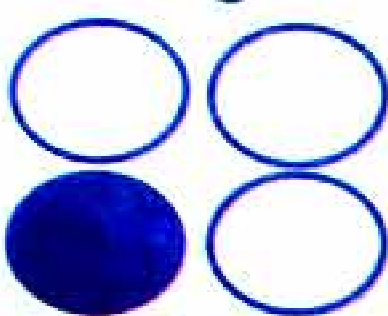





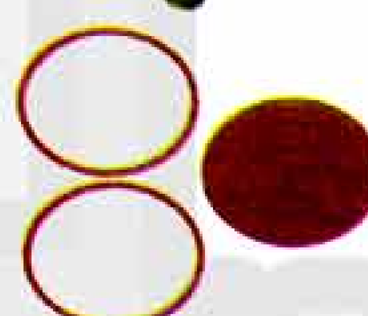
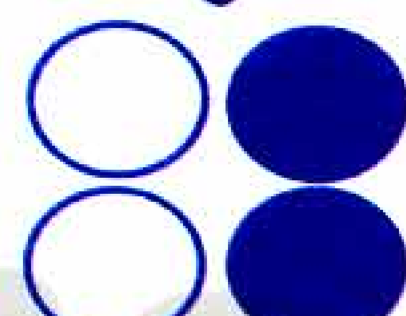








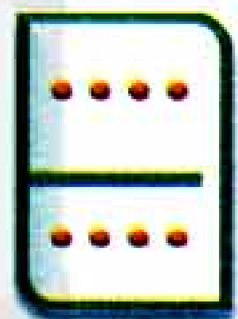


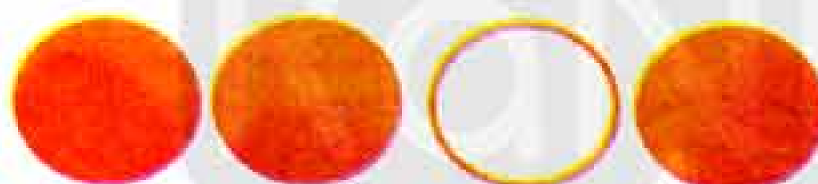
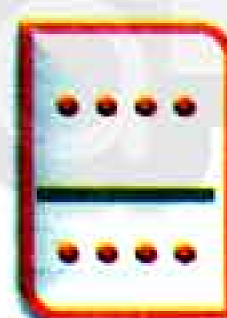



5 Complete:

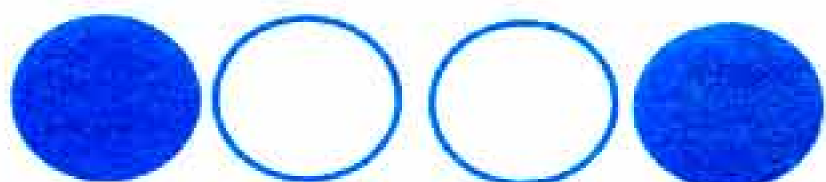
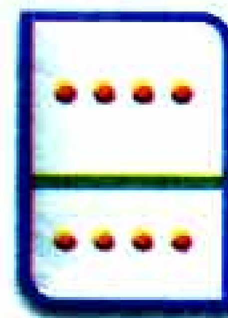


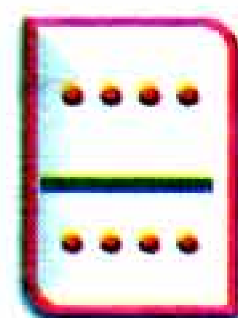


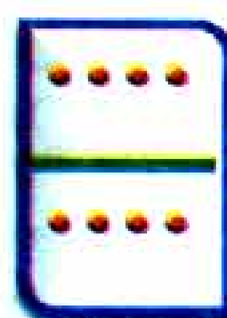
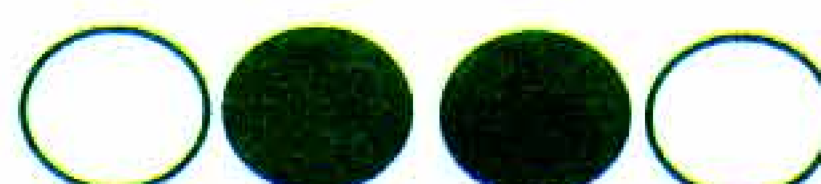
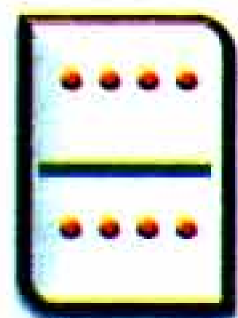




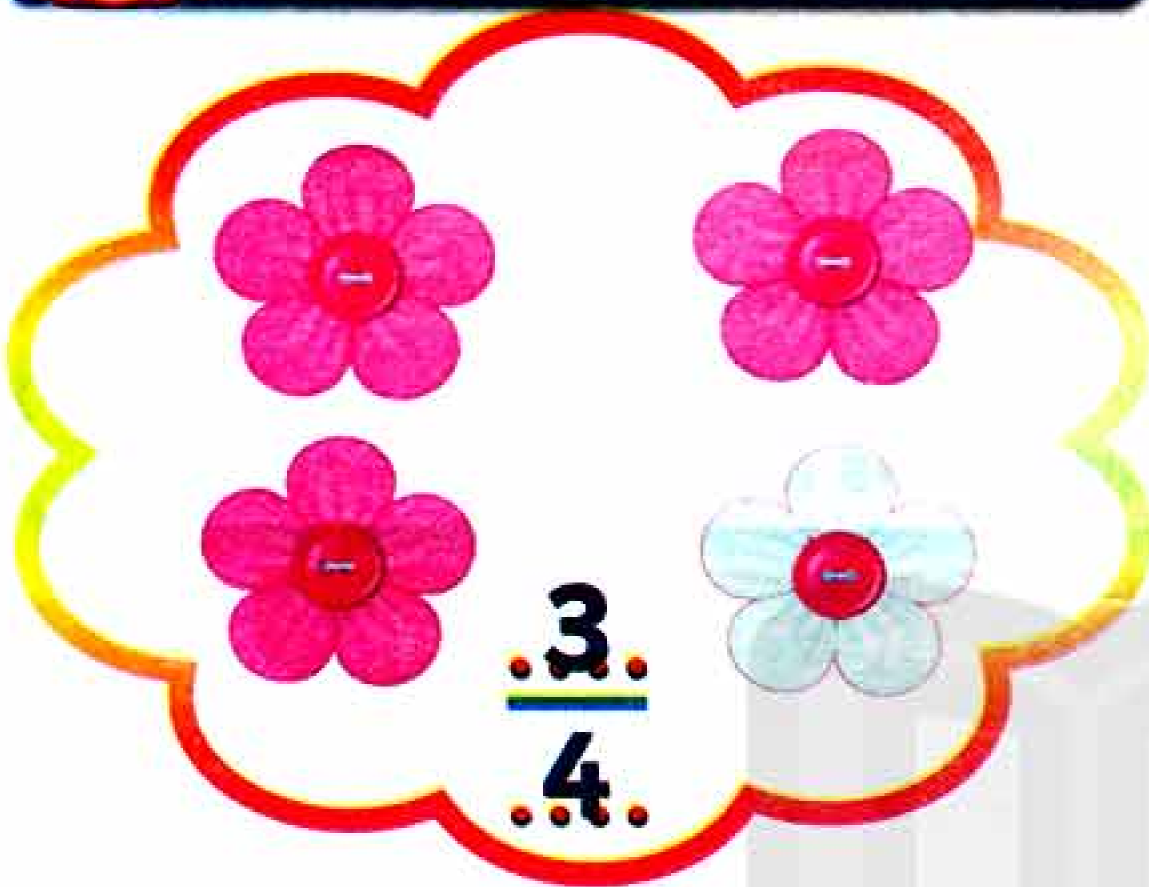



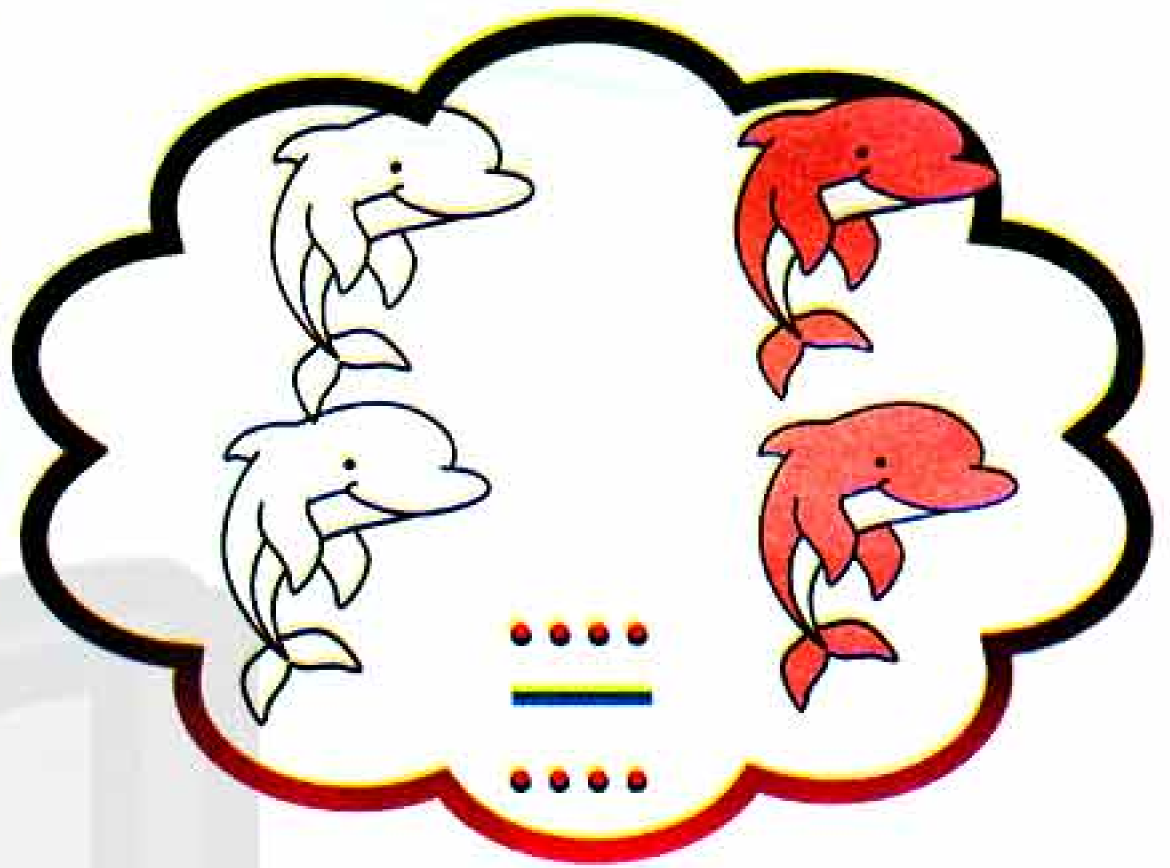


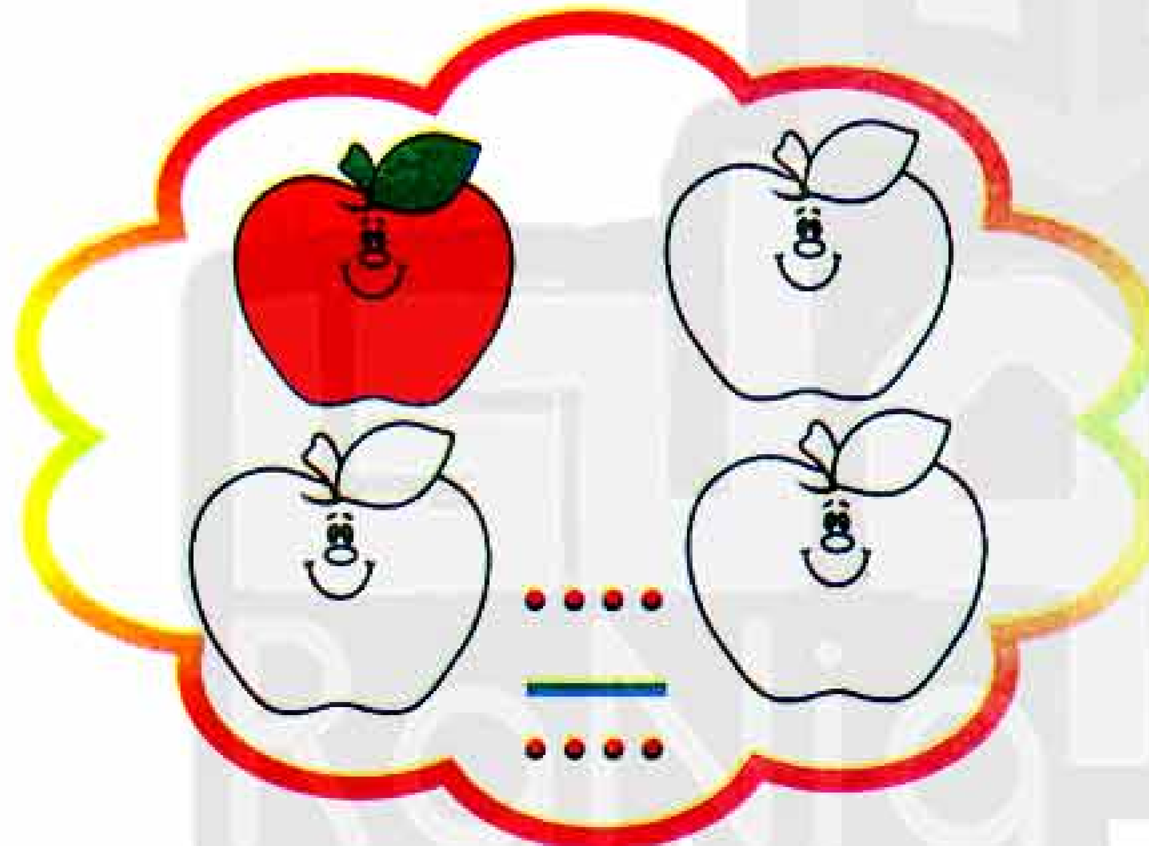







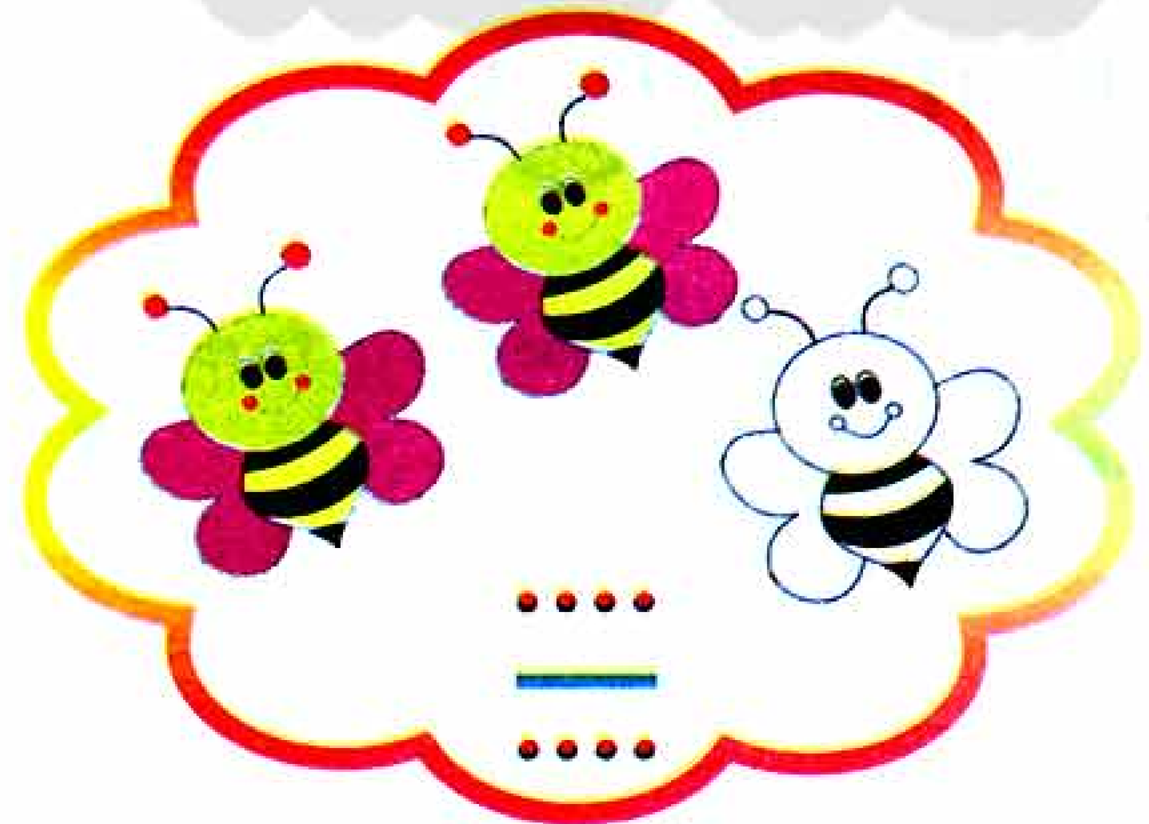
6 Write the fraction:















Lesson (108) Fractional parts of a set 2

Outcomes

Students will:

- Participate in Calendar math activities
- Identify fractions of a set of objects.
- Write fraction questions about a set of objects.

Look at each set and answer the questions:



1) What fraction of the flowers is red?

....

2) What fraction of the flowers is blue?

....

3) What fraction of the flowers is red and blue?

....



1) What fraction of the bikes is red?

....

2) What fraction of the bikes is blue?

....

3) What fraction of the bikes is red and blue?

....



1) What fraction of the soccer balls is big?

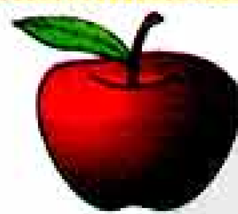
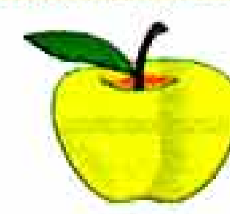
....

2) What fraction of the soccer balls is small?

....

3) What fraction of the soccer balls is colored?

....

1) What fraction of the apples is red?

....

2) What fraction of the apples have leaves?

....

3) What fraction of the apples is green?

....

1) What fraction of the birds is blue?

....

2) What fraction of the birds is pink?

....

3) What fraction of the birds have eyes?

....

1) What fraction of the pizzas has mushroom?

....

2) What fraction of the pizzas has cheese?

....

3) What fraction of the pizzas has no mushrooms?

....



Lesson (109)

Solving story problems involving fractions of a whole or a set

Outcomes

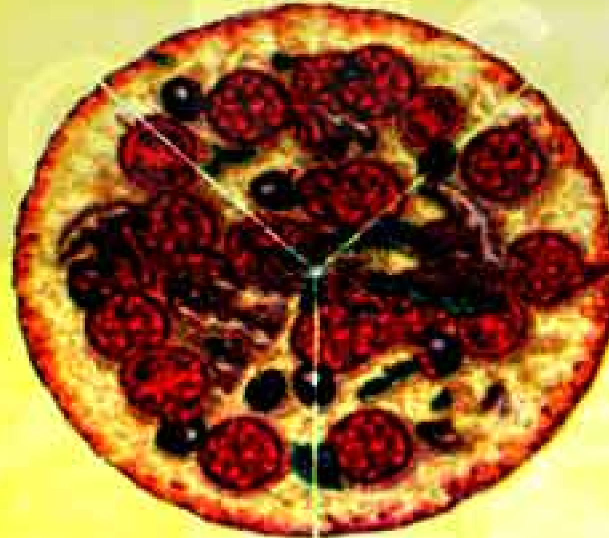
☞ **Students will:**

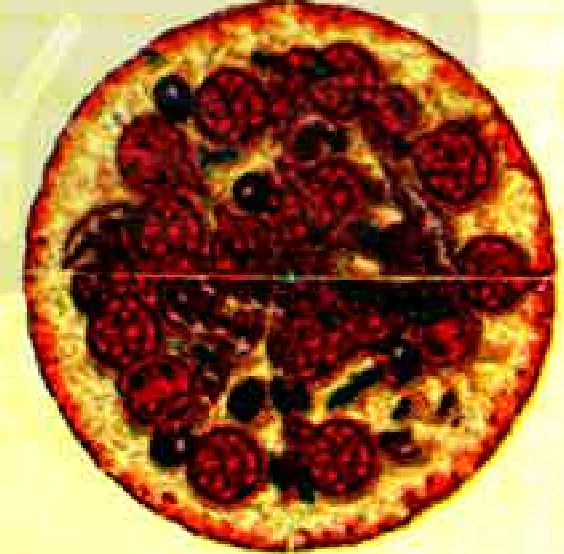
- Participate in Calendar Math activities.
- Solve story problems involving fractions of a whole or a set.
- Evaluate their progress in learning about fractions.

1 Cross out the 2 parts that do not match the clue:

4 friends share a (pizza). Each gets an equal share. How would you cut it?







....



Manar and a friend share a . Each gets an equal share. How would you cut it?



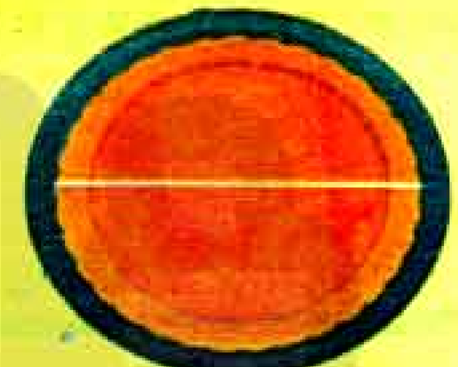


....

Soha, Zaher and Saad share a ⬤ .Each gets an equal share. How would you cut it?

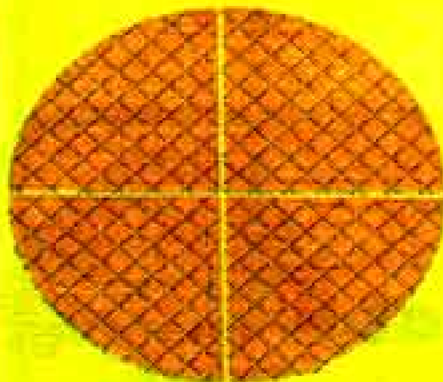


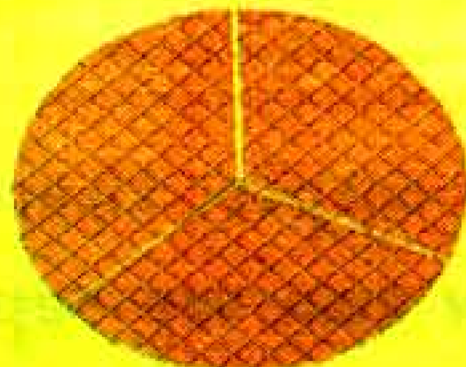


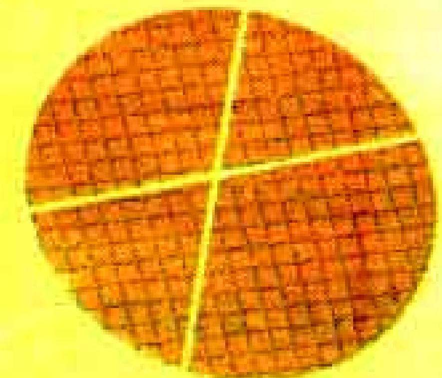


....

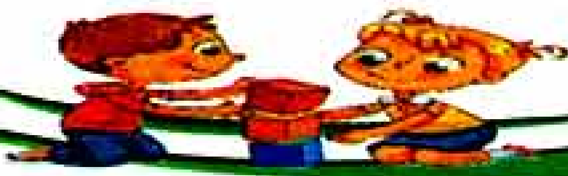
Hadeer and 3 friends share a ⬤ .Each gets an equal share. How would you cut it?







....

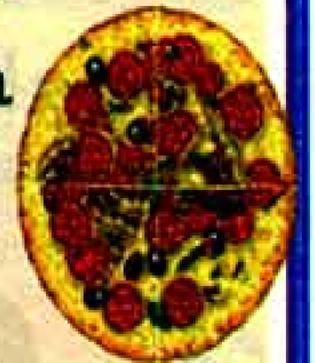


2 Solve the following problems:



In your fruit basket, there are 4 pieces of fruit, 3 of them are apples.

➪ How can we express the number of apples as a fraction ? ....



Hind divided her pizza into four equal parts. She gave her young sister one part of them. How can we represent the left parts in a fraction form?

➪ The left fraction is .... of a pizza.



Sara rode her bike for $\frac{1}{4}$ of a mile on Monday and $\frac{2}{4}$ of a mile on Tuesday. How can we represent the left in a fraction form?

➪ The left fraction is .... of mile.



Amany ate a half of an apple, then she ate $\frac{1}{4}$ of the same apple. How can we represent what she ate as a fraction?

➪ She ate .... of the apple.



Lesson (110) Flags and fractions

Outcomes

☞ Students will:

- Participate in Calendar Math activities.
- Partition rectangles into three or four equal parts.
- Demonstrate understanding that each fractional part of a rectangle is part of a whole.
- Describe equal parts of a whole using fraction vocabulary.

Activities

1 Complete:



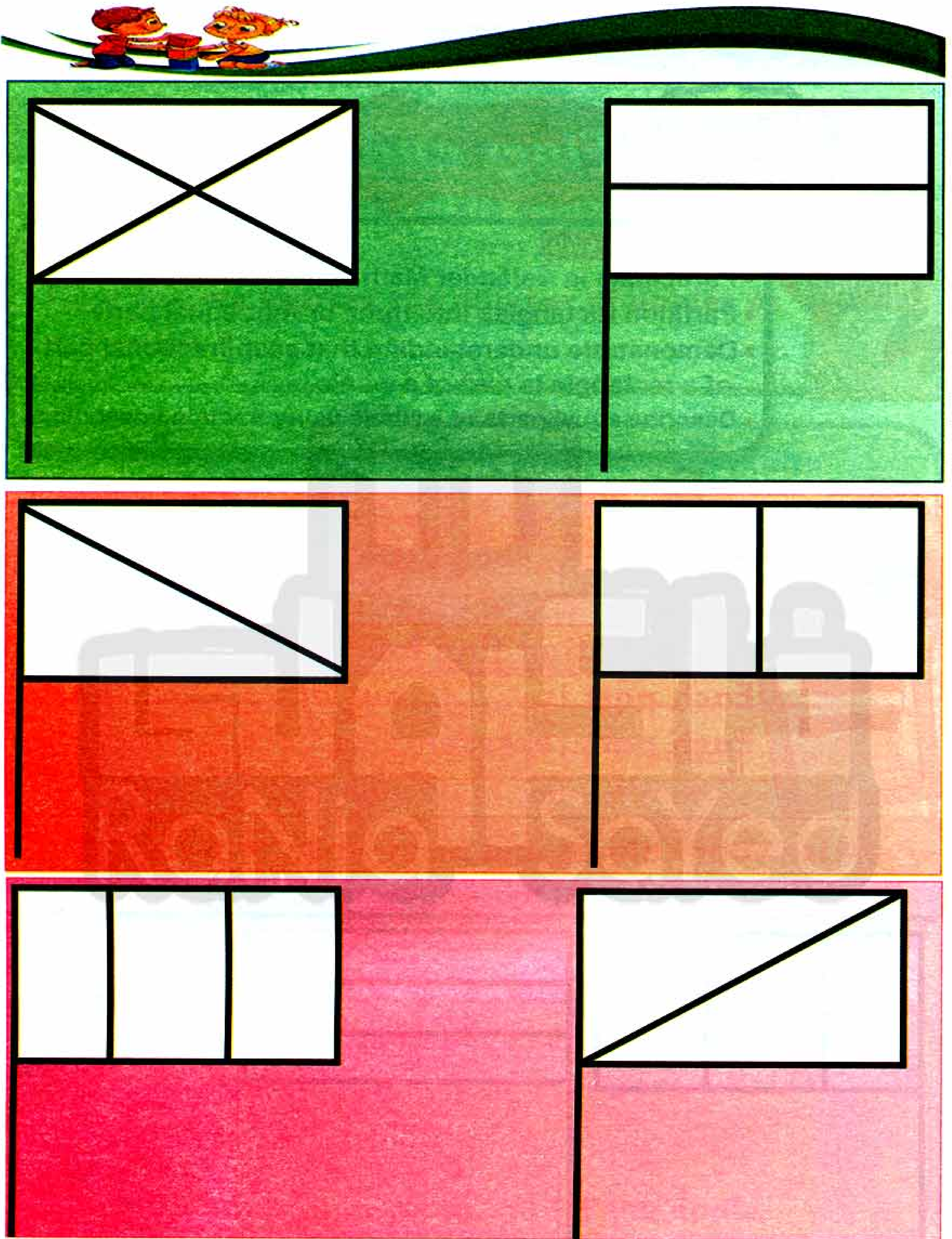
The Egyptian flag has .... equal parts.

Each part is.......... out of .... parts.

Each part represents $\frac{......}{......}$

2 Use your colours and make your own flags with different colours:









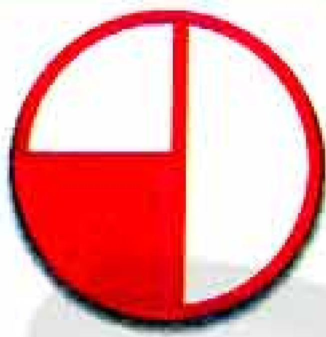
Review on Chapter (5)



1 Write the name of each fraction:



$\frac{.....}{.....}$



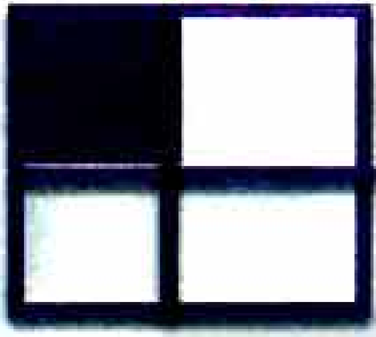
$\frac{.....}{.....}$



$\frac{.....}{.....}$



$\frac{.....}{.....}$



$\frac{.....}{.....}$



$\frac{.....}{.....}$



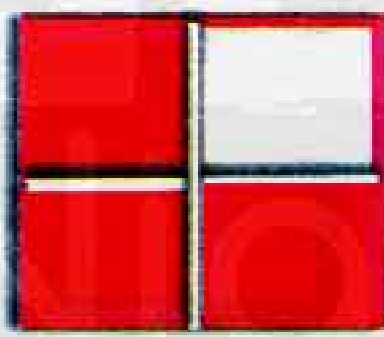
$\frac{.....}{.....}$



$\frac{.....}{.....}$



$\frac{.....}{.....}$



$\frac{.....}{.....}$



$\frac{.....}{.....}$



$\frac{.....}{.....}$

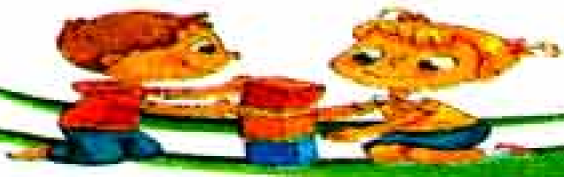


$\frac{.....}{.....}$



$\frac{.....}{.....}$





2 Color the fractions:

$\frac{2}{4}$ $\frac{2}{3}$ $\frac{1}{2}$

$\frac{3}{4}$ $\frac{1}{3}$ $\frac{1}{2}$

3 Match:

$\frac{1}{3}$

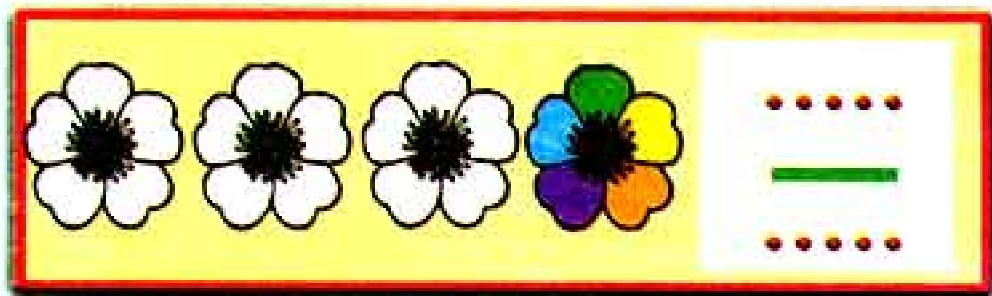
$\frac{1}{4}$

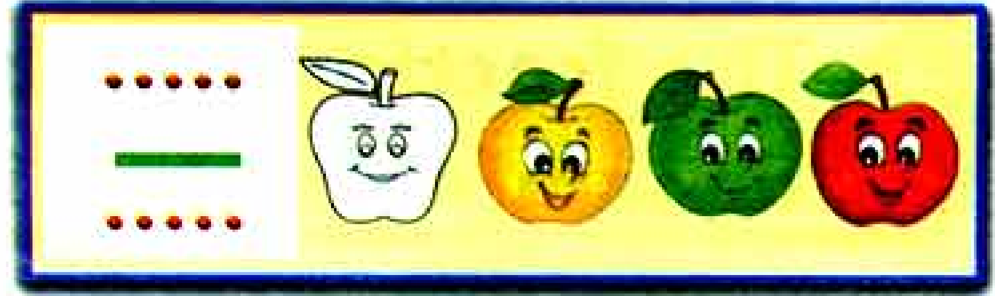
$\frac{3}{4}$

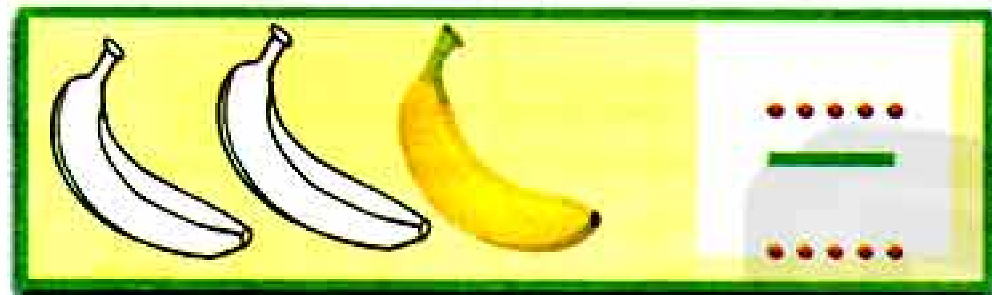
$\frac{1}{2}$



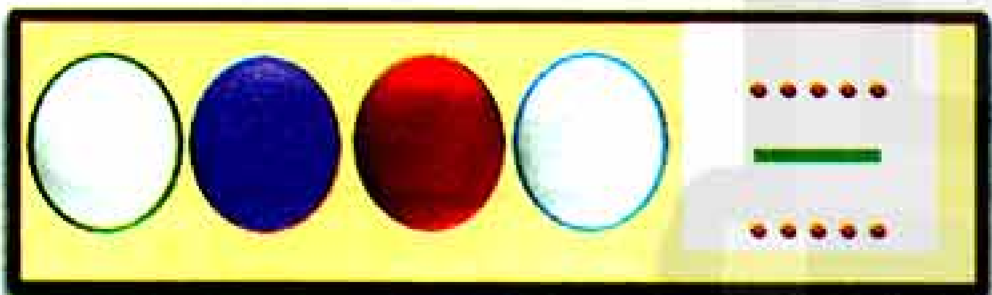
4 Write the name of each fraction:





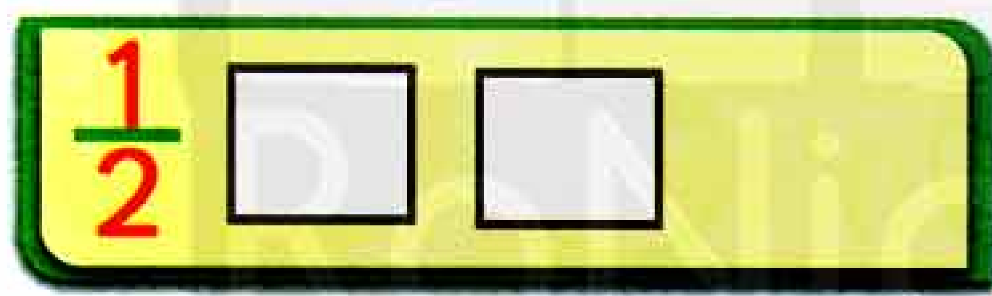


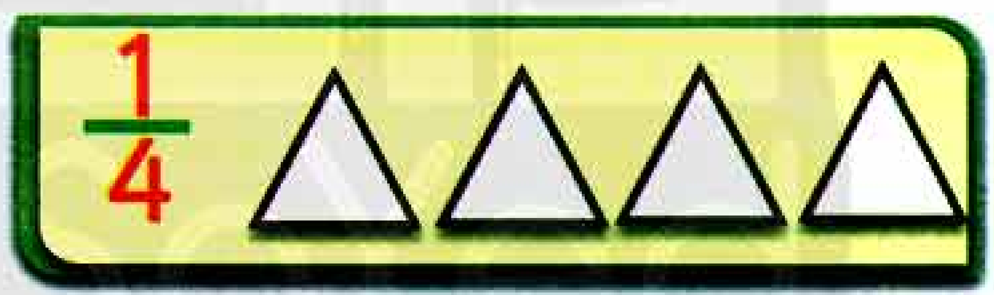


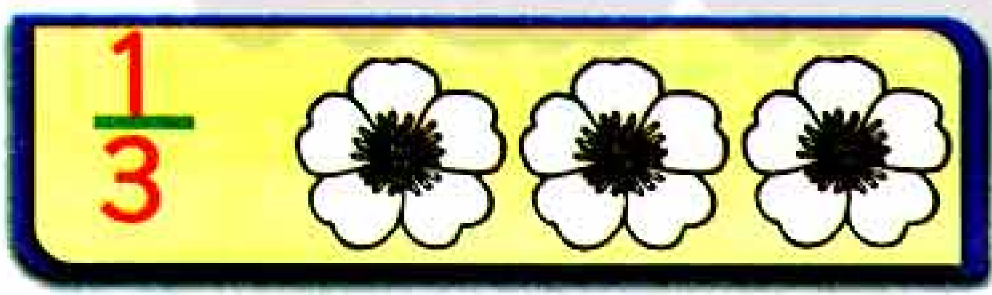


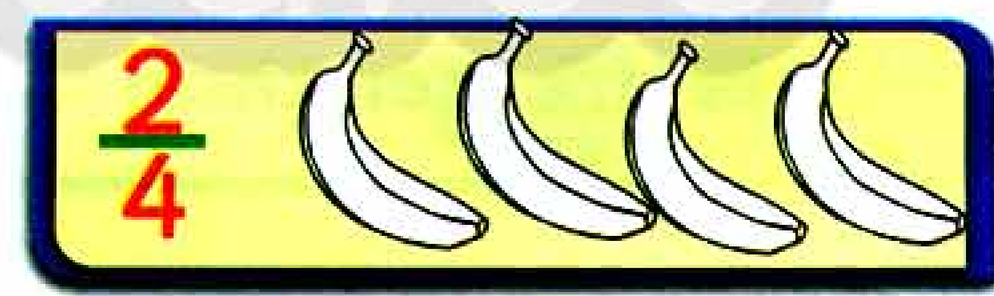


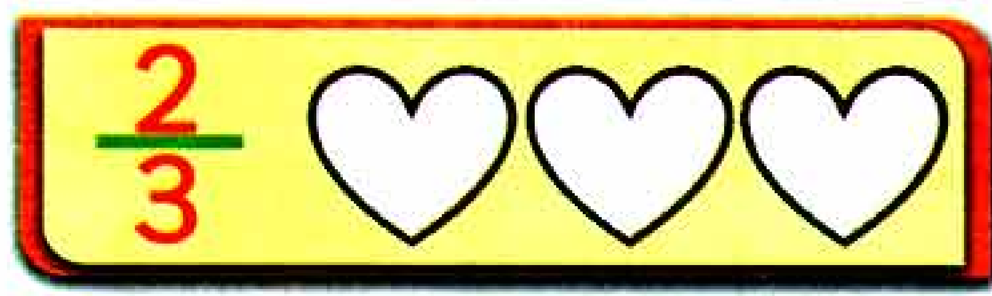
5 Color the fractions:















6 Choose the correct answer.

1. The fraction which numerator is 2 and denominator is 3 is ....

   ($\frac{2}{3}$ / $\frac{1}{3}$ / $\frac{1}{4}$)

2. One part of 3 equal parts is ....

   ($\frac{2}{3}$ / $\frac{1}{3}$ / $\frac{1}{4}$)

3. The coloured part in ▦ is ....

   ($\frac{2}{4}$ / $\frac{1}{3}$ / $\frac{1}{4}$)

4. The shape that represents $\frac{1}{3}$ is ....

   (◔ / ⊖ / ⊕)

5. $\frac{1}{3}$ is greater than .... ($\frac{1}{4}$ / $\frac{1}{2}$ / $\frac{2}{3}$)

6. If you cut a picture into 4 equal parts and one part of it is lost, so the left fraction is

   ($\frac{2}{3}$ / $\frac{1}{3}$ / $\frac{3}{4}$)



7 Write the fraction and match:



fraction
numerator 1
denominator 4

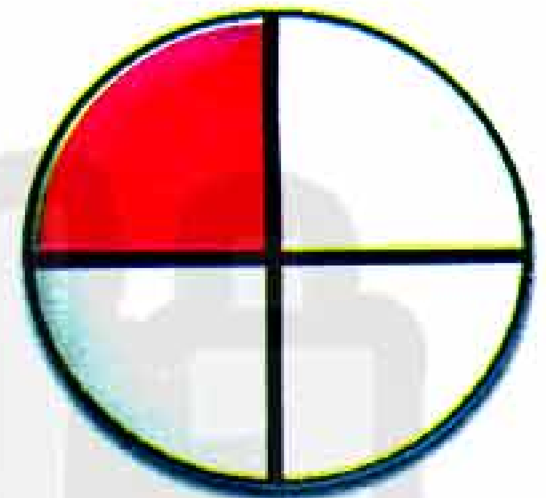
$\frac{.....}{.....}$





fraction
numerator 1
denominator 3

$\frac{.....}{.....}$





fraction
numerator 2
denominator 4

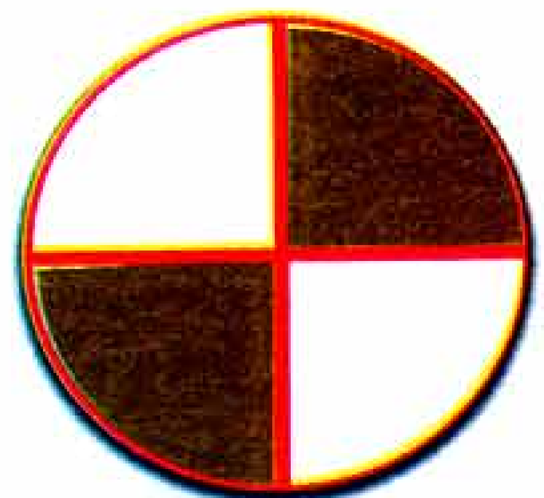
$\frac{.....}{.....}$





fraction
numerator 4
denominator 4

$\frac{.....}{.....}$



Chapter Six



Lesson (111) Bar Graphs / Pictograph

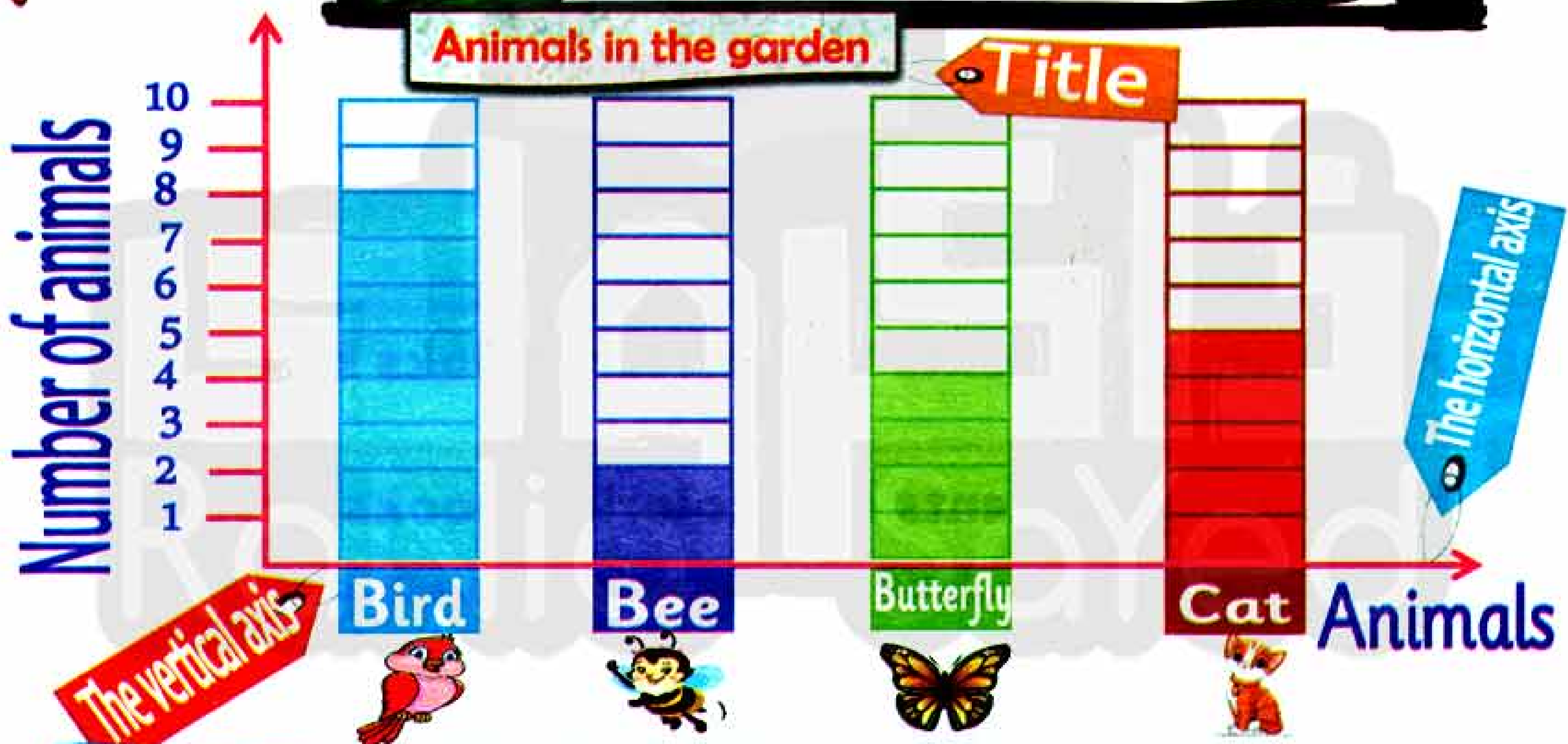
Outcomes

Students will:

- Participate in Calendar Math activities.
- Interpret data in bar graphs with a scale of 5 or 10.
- Interpret data in pictographs with a scale of 2 or 5.
- Explain why it is important to use an appropriate scale when creating graphs.

Remember

A bar graph is a chart that uses bars (or columns) to show data.



Complete using the previous bar graph:

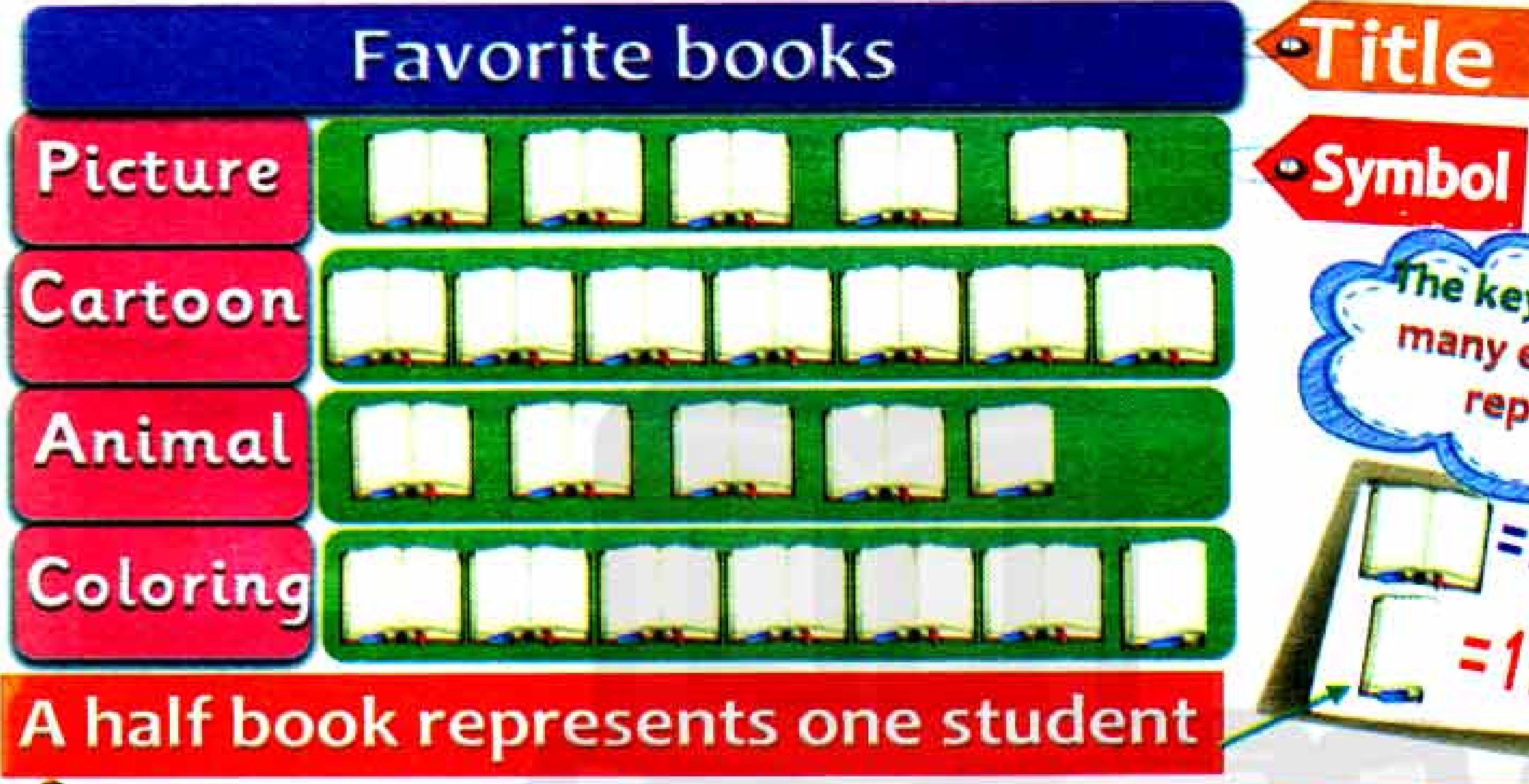
The number of birds is ....., the number of butterflies is ...

The number of bees is ....., the number of cats is .....

* How many total animals are in the garden?
* Which animal has the least number?
* Which animal has the most number?



Remember
A pictograph is another way to show data.
It uses pictures to tell "How many".



From the previous pictograph and its key, answer the questions:

1) How many students like picture books best?

....

2) How many students like coloring books best?

....

3) How many students like animal books best?

....

4) How many students like cartoon books best?

....

5) Which kind of books is liked the most?

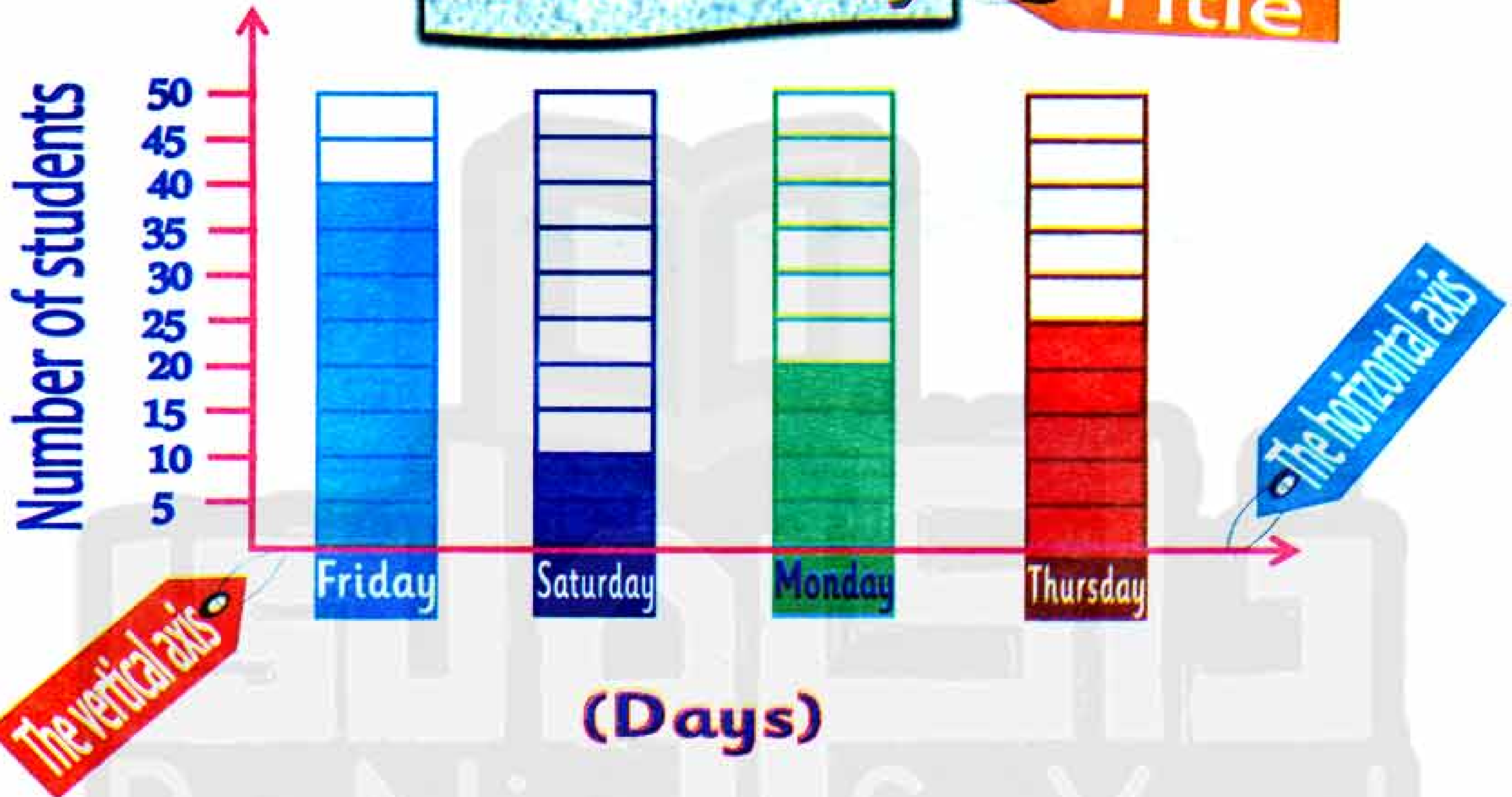
....

6) Which kind of books is liked the least?

....

Activities

1 Look at the data in the bar graph and answer the questions:



1) How many students prefer Monday?

....

2) How many students prefer Saturday and Thursday?

....

3) How many more students prefer Friday than Thursday?

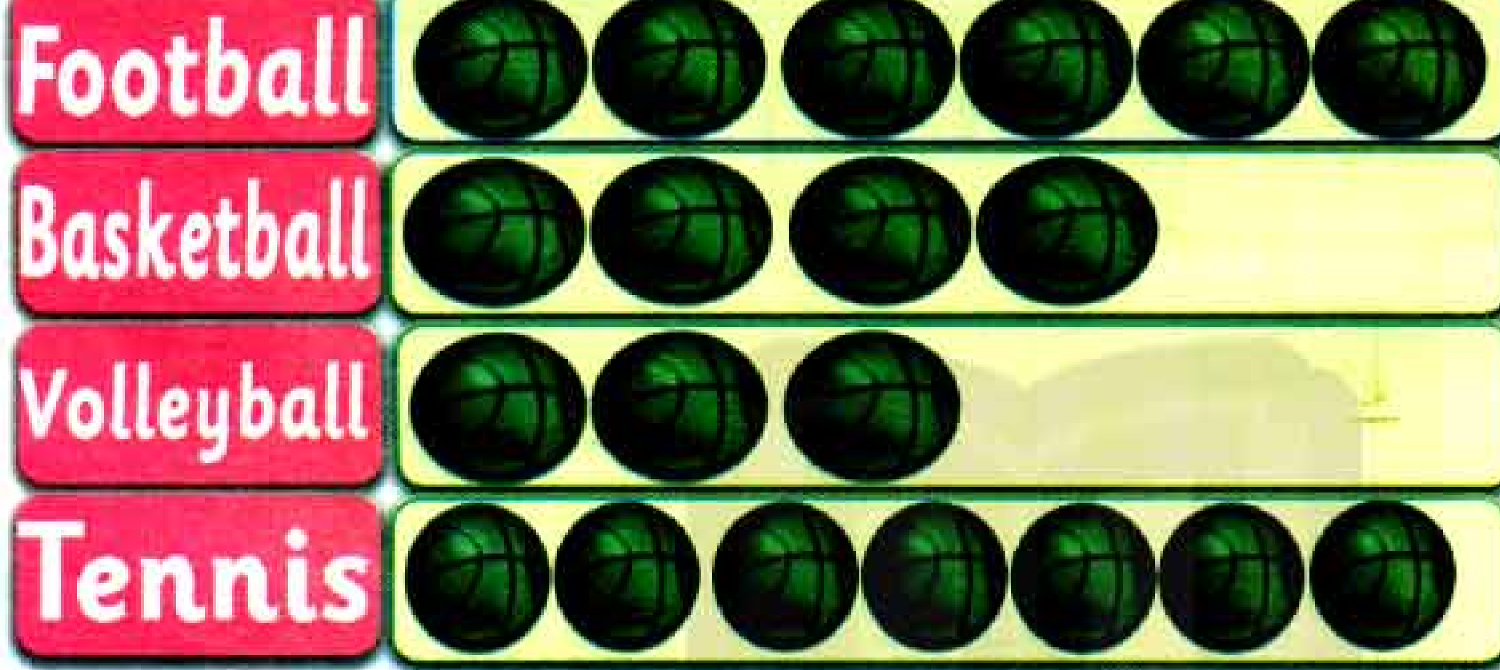
....

4) What is the most popular day in this graph?

....



2 Look at the data in the pictograph and answer the questions:



1) How many basketballs are sold in a week?

....

2) How many tennis balls are sold in a week?

....

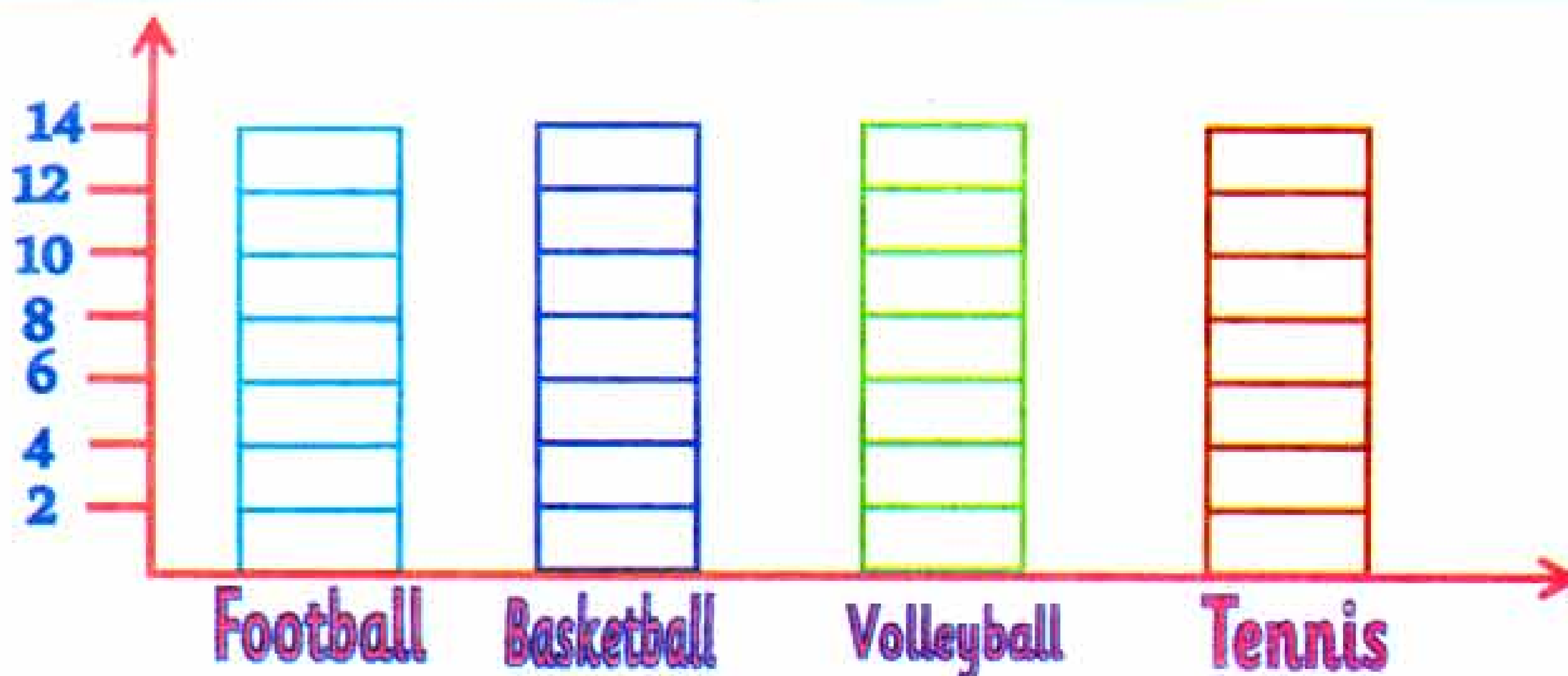
3) How many fewer basketballs are sold than footballs?

....

4) What is the total number of sold balls in a week?

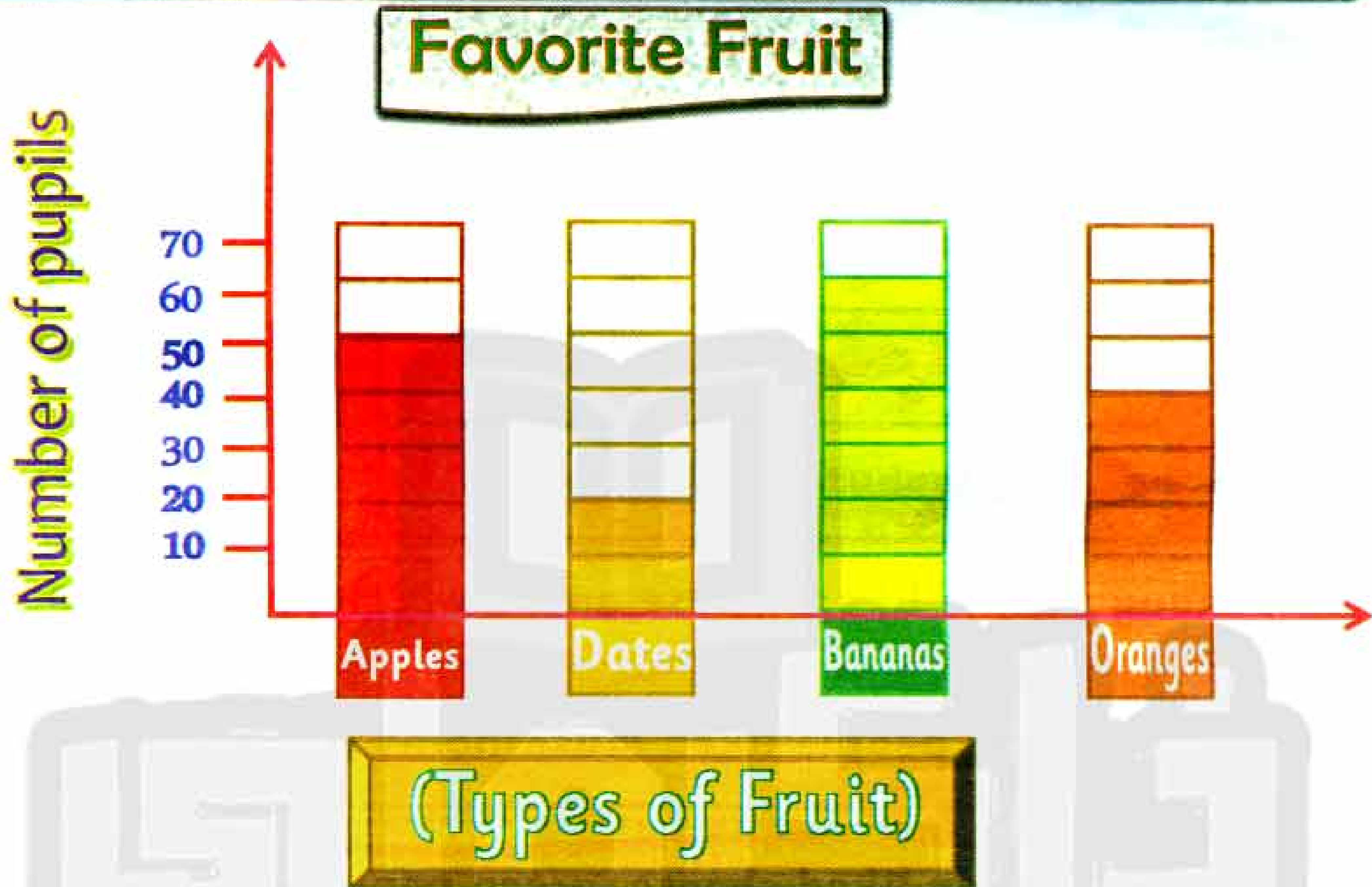
....

3 Using the previous pictograph, complete this bar graph:





4 Look at the data in the graph and answer the questions below:



1) How many pupils like oranges?

....

2) How many pupils like apples and bananas?

....

3) How many more pupils like bananas than dates?

....

4) How many pupils were asked about their favorite fruit?

....

5) What is the least popular fruit on this graph?

....



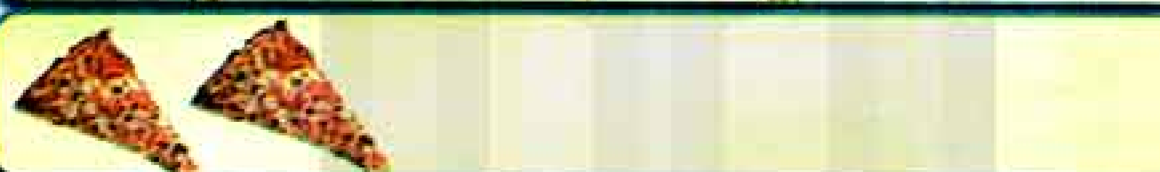
5 Look at the data in the pictograph and answer the questions below:

Favorite Pizza Toppings

Green papers 

Cheese 

Olives 

Mushrooms 



1) How many people liked cheese and green peppers?

....

2) How many fewer people liked mushrooms than olives?

....

3) How many people liked cheese, green peppers and olives?

....

4) How many more people liked cheese than green peppers?

....

5) What is the most kind of pizza topping on this graph?

....

6 Complete using the previous pictograph:

Kind	Green papers	Cheese	Olives	Mushrooms
Number				

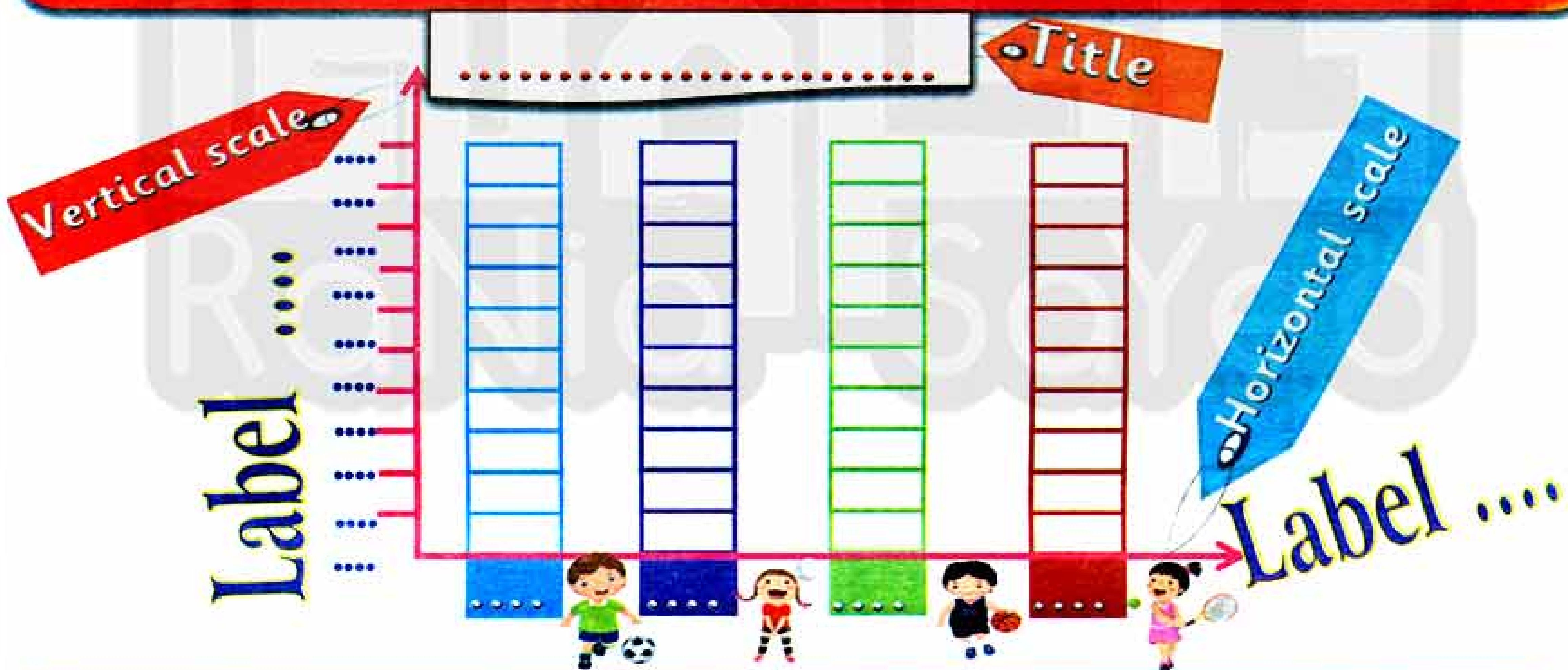
Lesson (112) Making bar graph from a story

Outcomes

☞ Students will:

- Participate in Calendar Math activities.
- Organize four categories of data into a bar graph.
- Choose an appropriate scale based on the data being graphed.
- Create and solve put-together, compare, and take-apart problems using data.

1 Mariam did a survey in her class about their favorite sports. 20 students like football, 15 students like basketball, 5 students like tennis and 10 students like volleyball. Make a bar graph using the data from the story.
Be sure to include a (title, labels, scale, and colored bars).



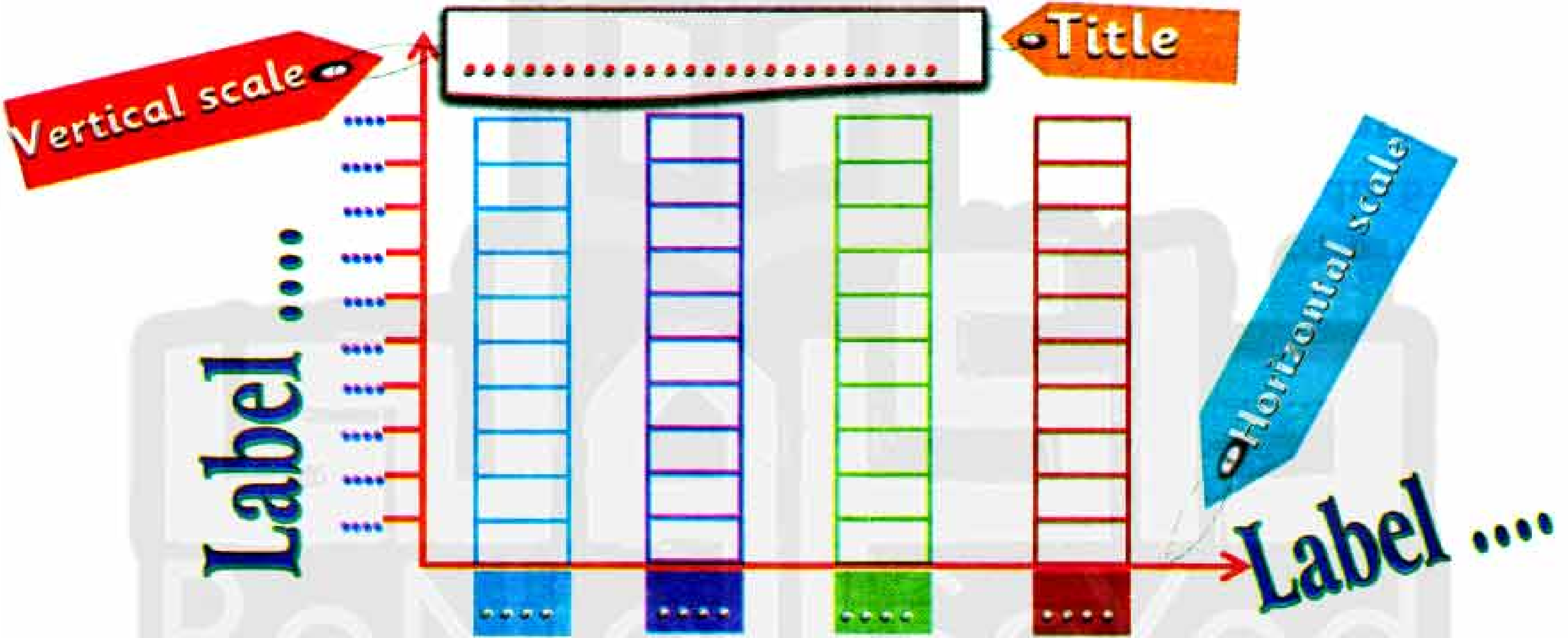
Write three questions about the graph and then answer them:

1- .... Answer: ....
2-........................ Answer: ....
3-........................ Answer: ....



2 Lora made a survey about the favorite color for some friends; 20 of them prefer red, 10 blue, 15 green and 5 oranges. Use the data to make a bar graph and suggest some questions about the data, then answer them





1-..

Answer: ....

2-..

Answer: ....

3-..

Answer: ....



Lesson (113) Making a pictograph from a story

Outcomes

Students will:

- Participate in Calendar Math activities.
- Organize four categories of data into a pictograph.
- Choose an appropriate scale based on the data being graphed.
- Create and solve put-together, compare, and take-apart problems using data.

Dalia tried to count the number of students who ate pizza during the week. She recorded 9 on Monday, 6 on Tuesday, 5 on Wednesday, 20 on Thursday and 8 on Friday. **Make a pictograph to represent this survey, then suggest questions and answer them.**

Title (..................)

Day	Number
Monday	....
Tuesday	....
Wednesday	....
Thursday	....
Friday	....

Key:..........

1 - ....

Answer: ....

2 - ....

Answer: ....

3 - ....

Answer: ....

☞ Fares asked his friends about their favorite animal, 10 like cats, 15 like dogs, 7 like birds and 6 like fish. Make a pictograph to represent these data, then suggest questions and answer them.

Title (..................)

Animal	Number
Cats	....
Dogs	....
Birds	....
Fish	....

Key
....

1 - ....

Answer: ....

2 - ....

Answer: ....

3 - ....

Answer: ....

4 - ....

Answer: ....

5 - ....

Answer: ....



☞ Radwa made a survey about the favorite activities by asking a group of friends. 8 of them like riding bikes, 7 like riding scooters, 4 like playing games, 4 like jumping rope and 3 like playing with toys.

Title (..................)

Game	Number
Ride bike	....
Ride scooter	....
Play games	....
Jump rope	....
Play with toys	....

Key
....

1 - ....

Answer: ....

2 - ....

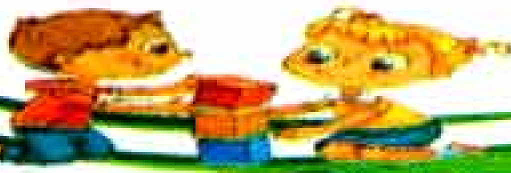
Answer: ....

3 - ....

Answer: ....

4 - ....

Answer: ....

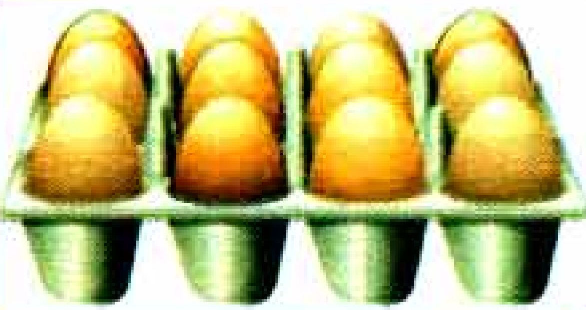


Lesson (114) Real-world arrays

Outcomes

☞ Students will:

- Participate in Calendar Math Activities.
- Identify real-world arrays.
- Write repeated addition sentences for arrays.
- Calculate the total number of objects in arrays.



We can name the array by looking at how many rows -(3)- and columns -(4)- the array has.

We can also write addition sentences for arrays.

4 + 4 + 4 = 12 or 3 + 3 + 3 + 3 = 12

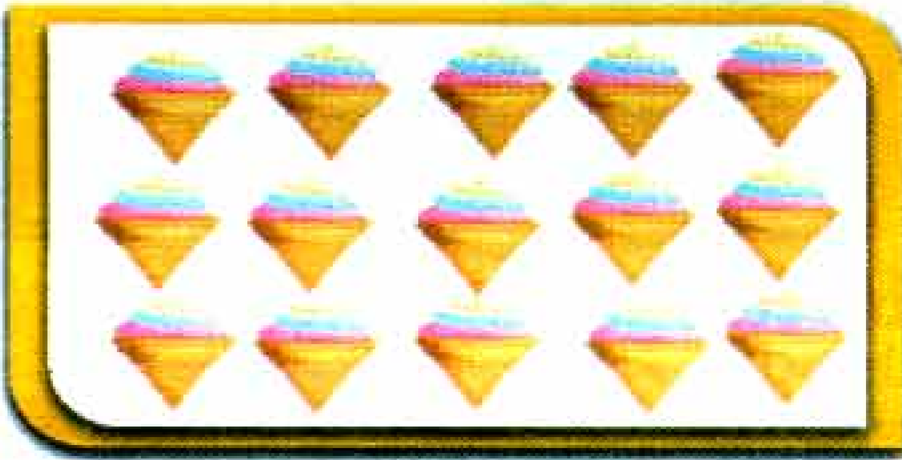
Rows: 3
Columns: 4
3 by 4 array
The number of eggs:
4 + 4 + 4 = 12 (according the rows)
3 + 3 + 3 + 3 = 12 (according the columns)



Rows: 2
Columns: 3
2 by 3 array
The number of eggs:
3 + 3 = 6 (according the rows)
2 + 2 + 2 = 6 (according the columns)



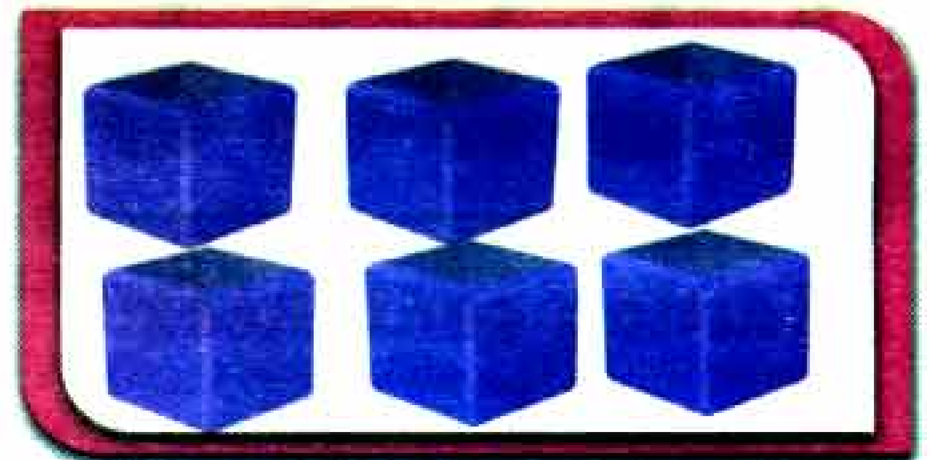

Write two repeated addition sentences for each array:



Addition sentences:

....

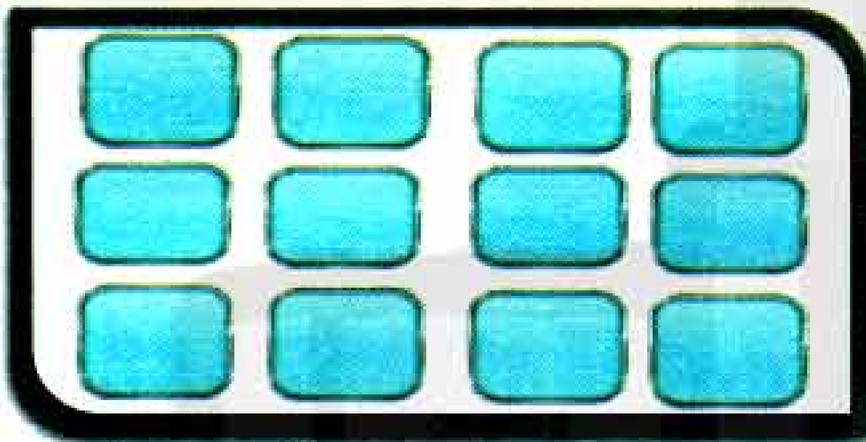
....



Addition sentences:

....

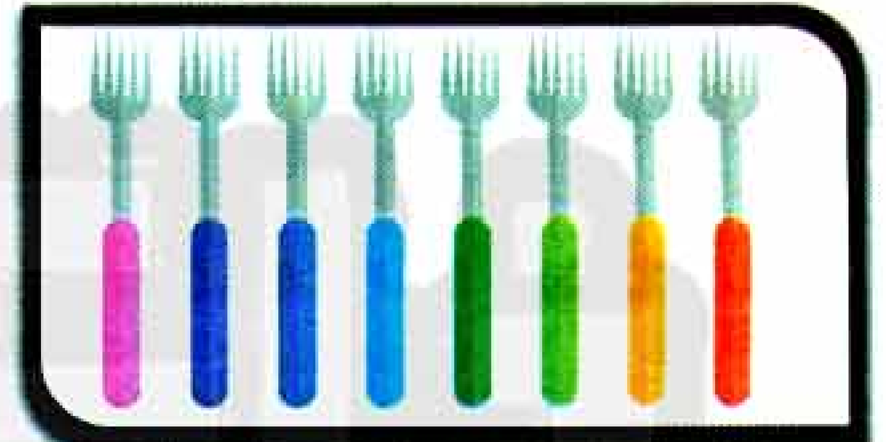
....



Addition sentences:

....

....



Addition sentences:

....

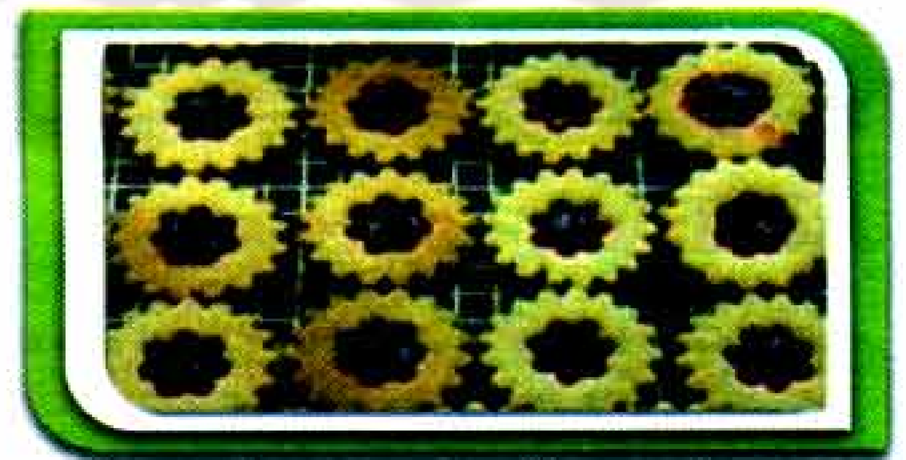
....



Addition sentences:

....

....

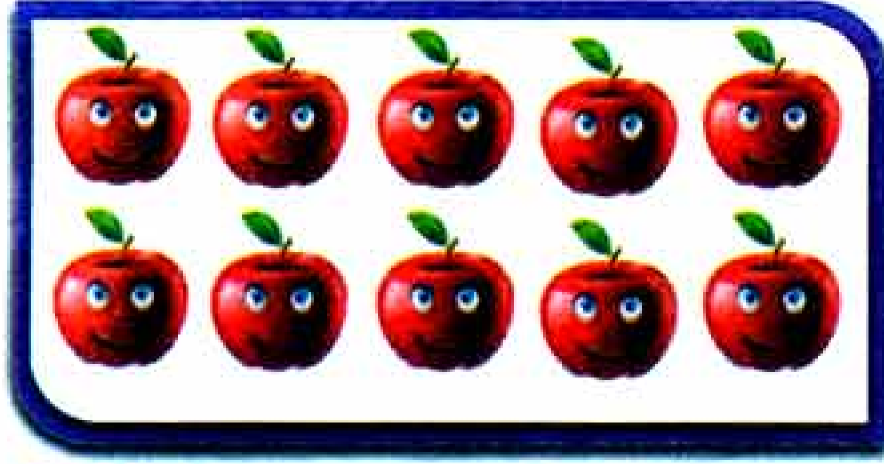


Addition sentences:

....

....

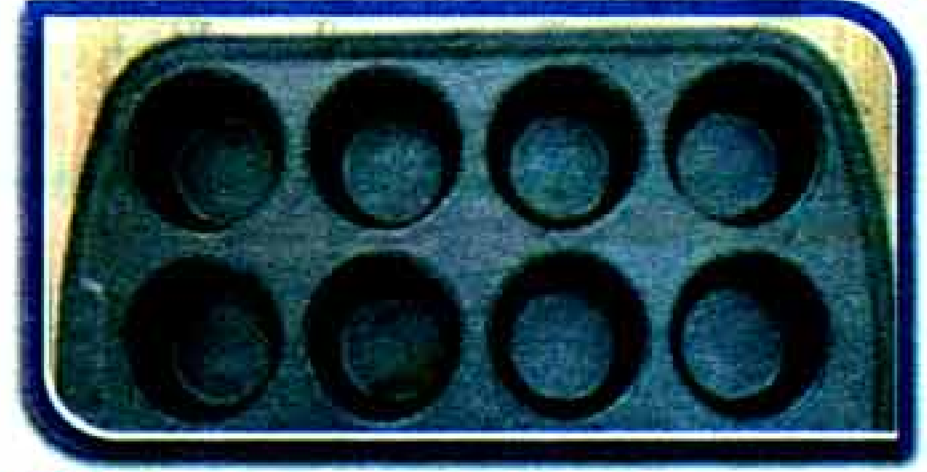




Addition sentences:

....

....



Addition sentences:

....

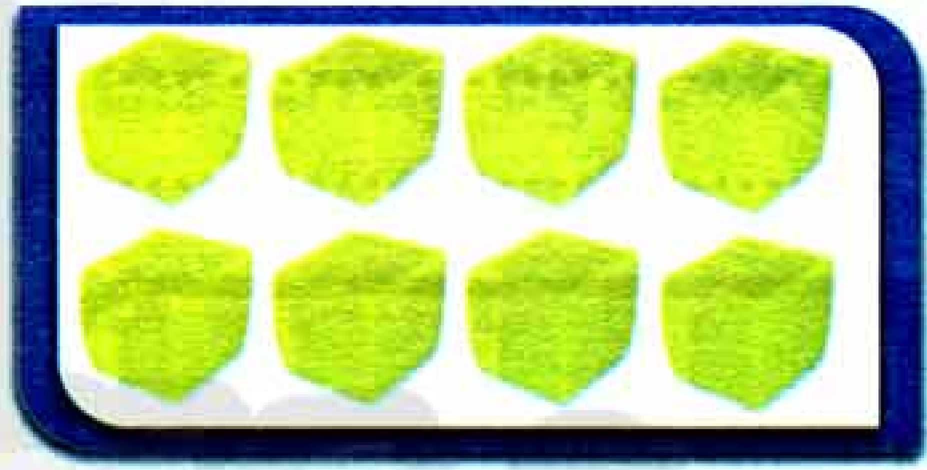
....



Addition sentences:

....

....



Addition sentences:

....

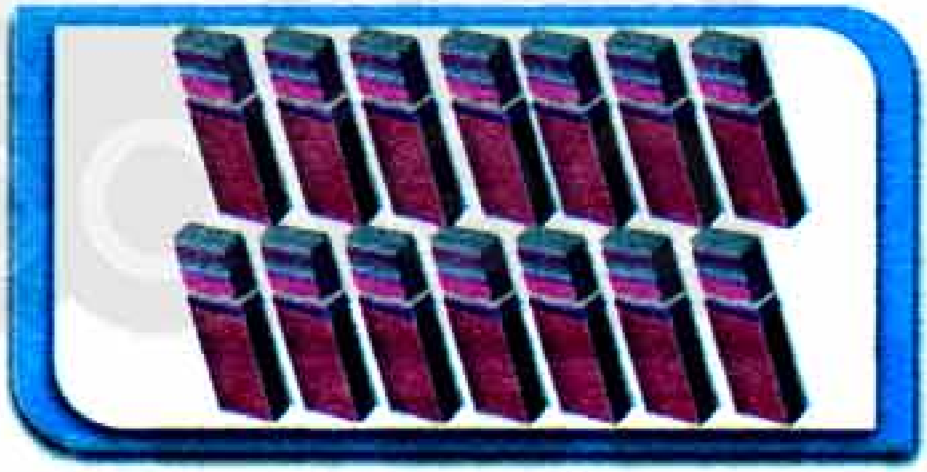
....



Addition sentences:

....

....



Addition sentences:

....

....



Lesson (115) Human Array

Outcomes

☞ Students will:
- Participate in Calendar Math activities.
- Collect arrays with given rows and columns.
- Write a repeated addition sentence to express the total number of objects in an array.

Remember

3 by 4

3 → Number of rows
4 → Number of columns



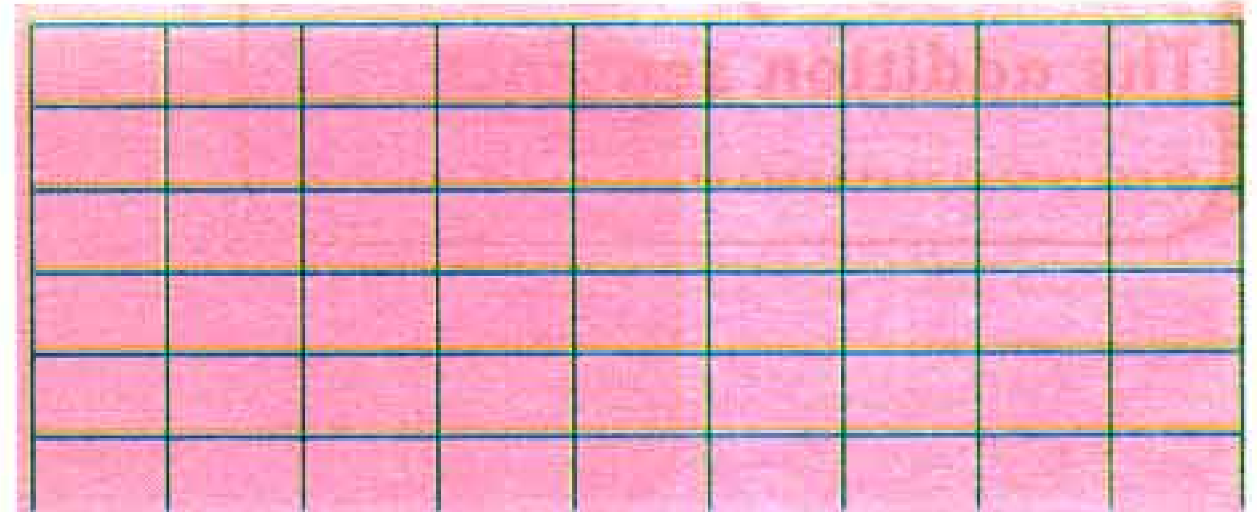
3 by 4 means that 3 is repeated 4 times 3 + 3 + 3 + 3 = 12

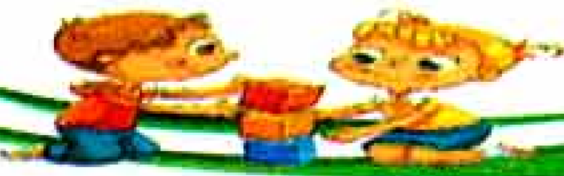
Using the grid, represent the arrays and write the addition sentences:

4 by 3
The addition sentence:
....



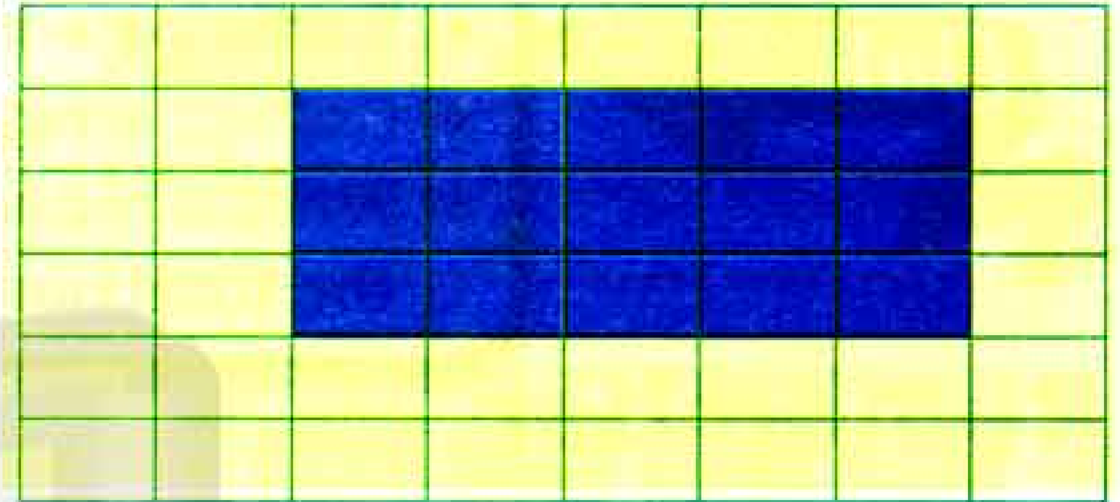
5 by 3
The addition sentence:
....



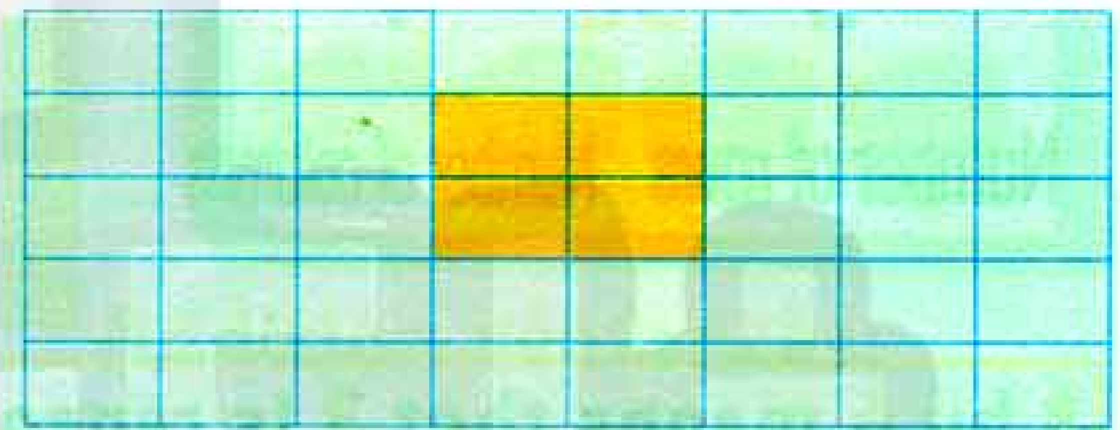


Activities

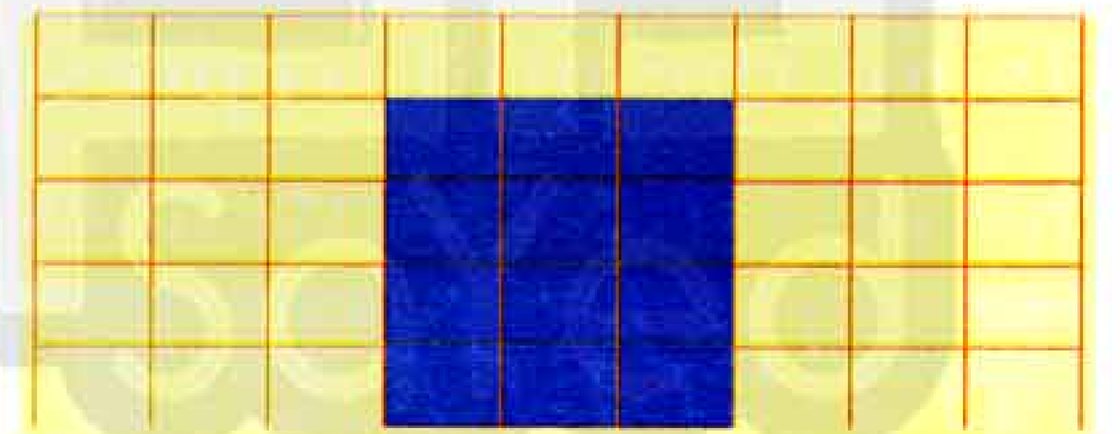
1 According the grid, write the shown array and the addition sentence:



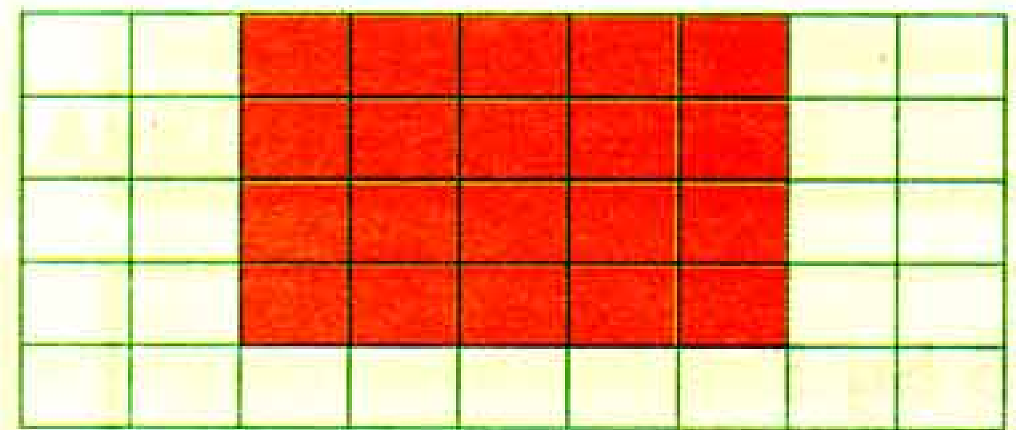
Array
..... by ....
The addition sentence
....



Array
..... by ....
The addition sentence
....



Array
..... by ....
The addition sentence
....

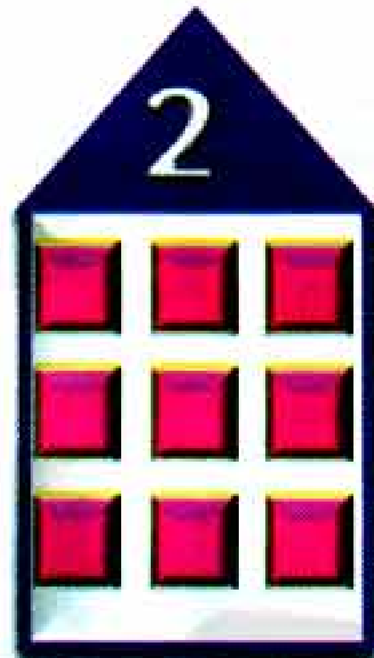


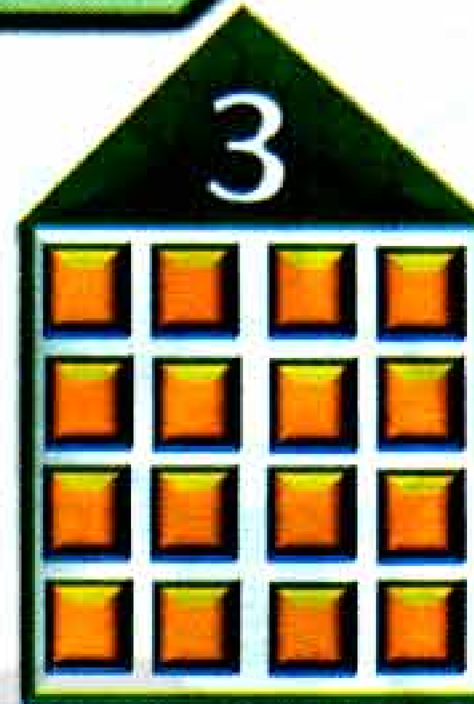
Array
..... by ....
The addition sentence
....



2 Complete as the example:







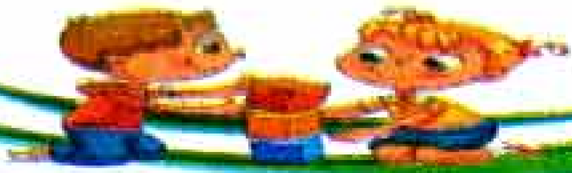


a) Building No.1
Array: 2 by 2
Addition sentence: 2 + 2
Total windows: 4

b) Building No.2
Array: ...... by ......
Addition sentence: ...... + ...
Total windows: ......

c) Building No.3
Array: ...... by ......
Addition sentence: ...... + ...
Total windows: ......

d) Building No.4
Array: ...... by ......
Addition sentence: ...... + ...
Total windows: ......

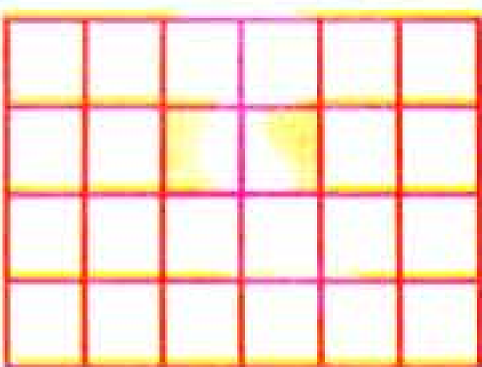


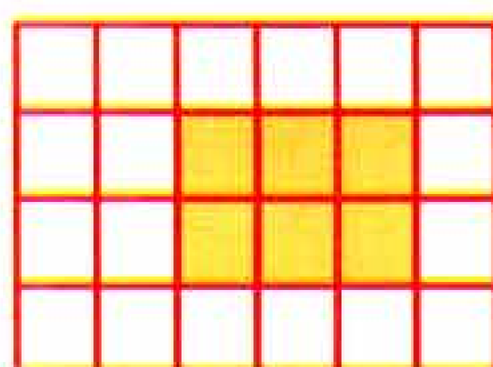
3 Complete:

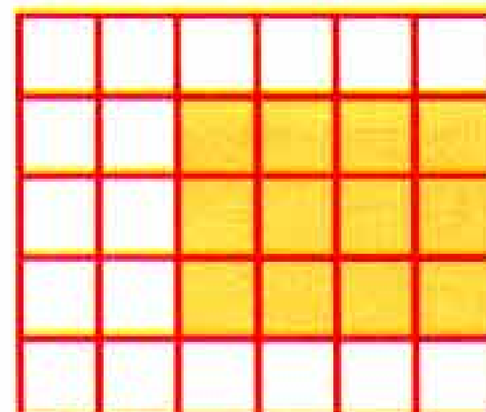
1. 3 by 2
3 + 3 = 6
2. 6 by 3
....
3. 9 by 3
....
4. 10 by 3
....
5. 8 by 2
....
6. 4 by 7
....
7. 4 by 4
....
8. 5 by 2
....
9. 5 by 4
....
10. 6 by 2
....
11. 3 by 3
....
12. 7 by 2
....

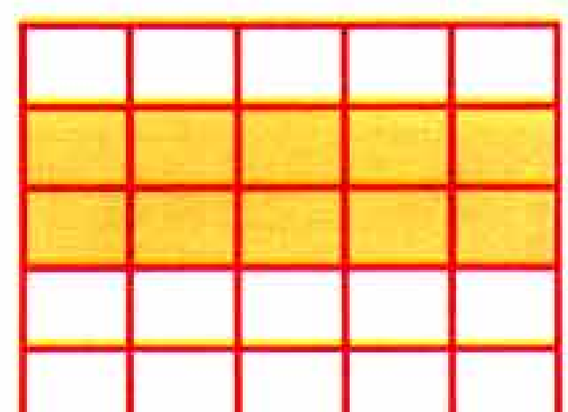
4 Match each array with the suitable shape and addition sentence:

4 + 4 + 4 | 5 + 5 | 2 | 3 + 3









5 by 2 | 4 by 3 | 3 by 2 | 2 by 1

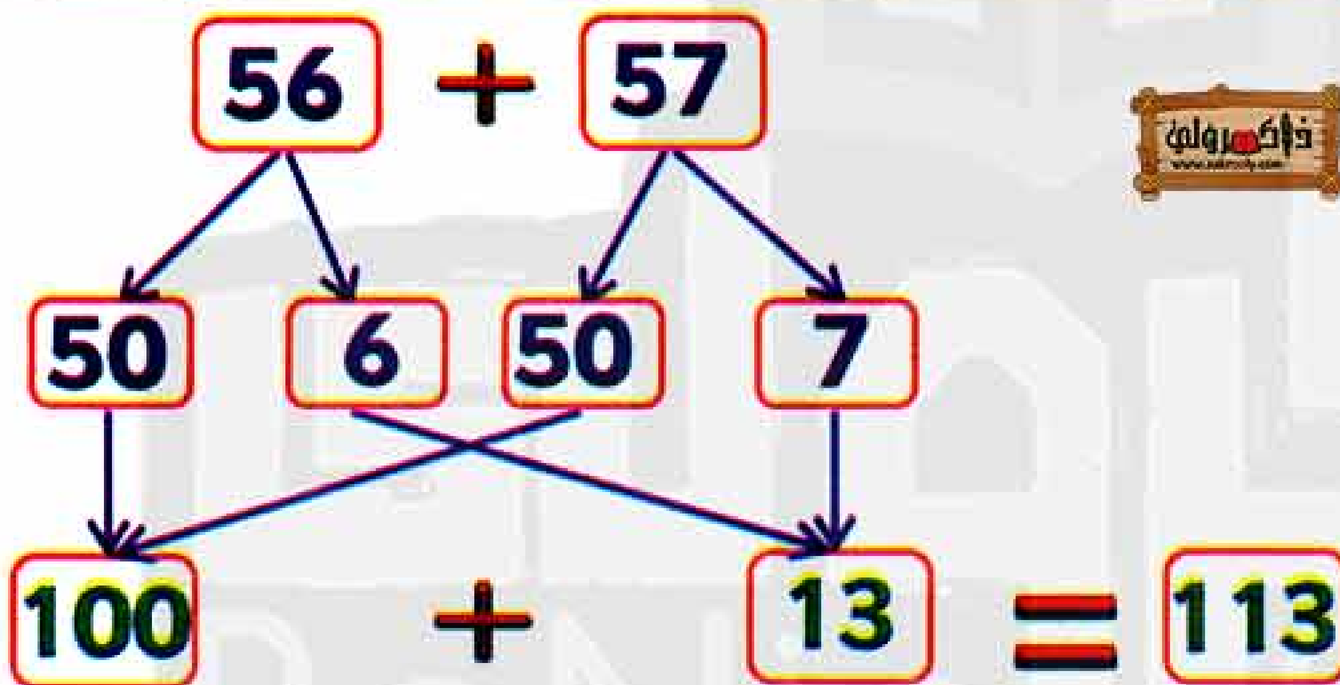
Lesson (116) Adding and subtracting large numbers using mental math strategies

Outcomes

Students will:

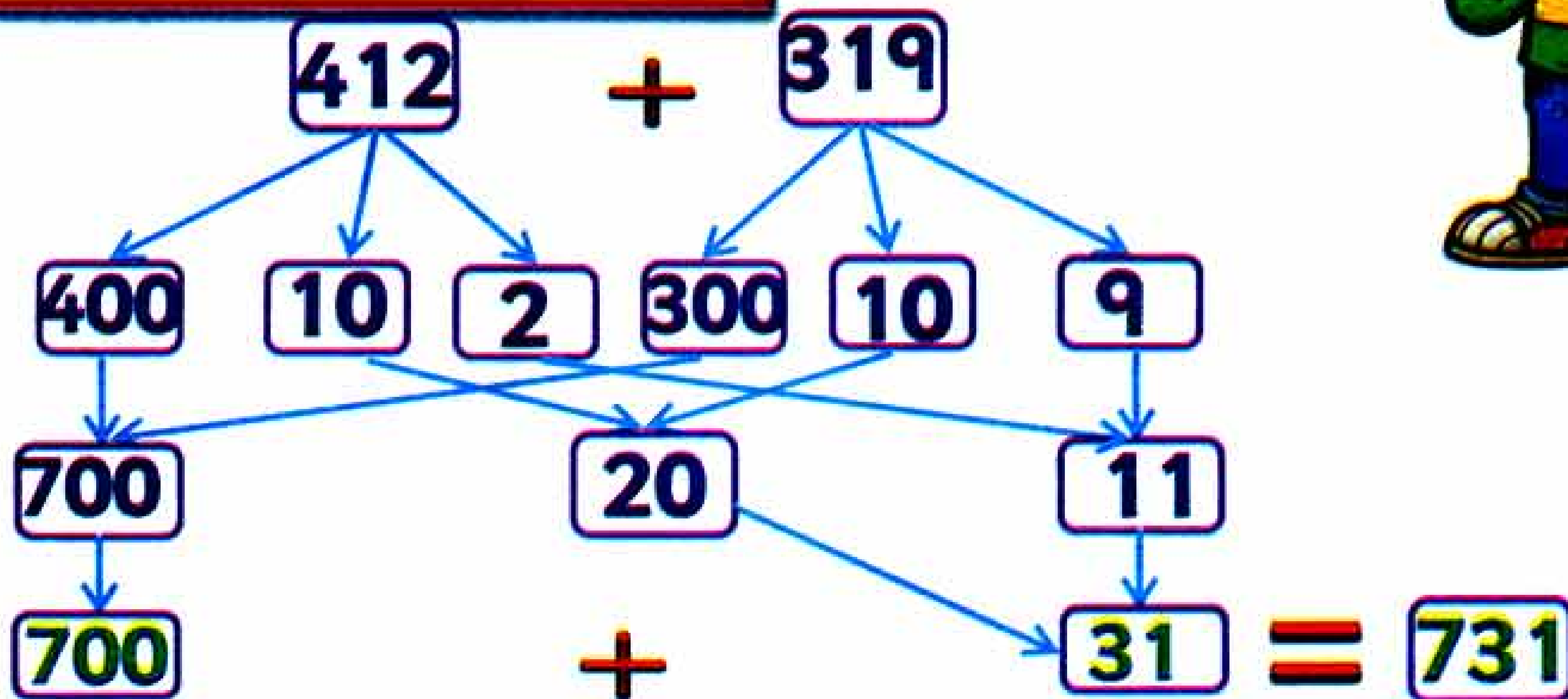
- Participate in Calendar Math Activities.
- Add and subtract 1-, 2-, and 3-digit numbers.
- Apply a variety of strategies to solve problems.
- Identify and correct errors in their work and the work of others.

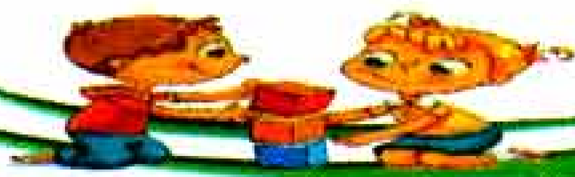
1 Add 56 + 57 (using decomposing)





2 Add 412 + 319





Add:

247 + 376

45 + 67

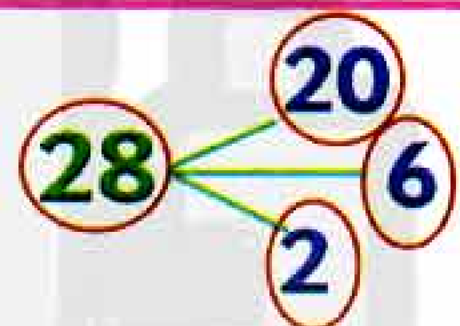
3 Subtract 72 - 28 (using decomposing)

72 - 28 = ...

72 - 20 = 52

52 - 2 = 50

50 - 6 = 44



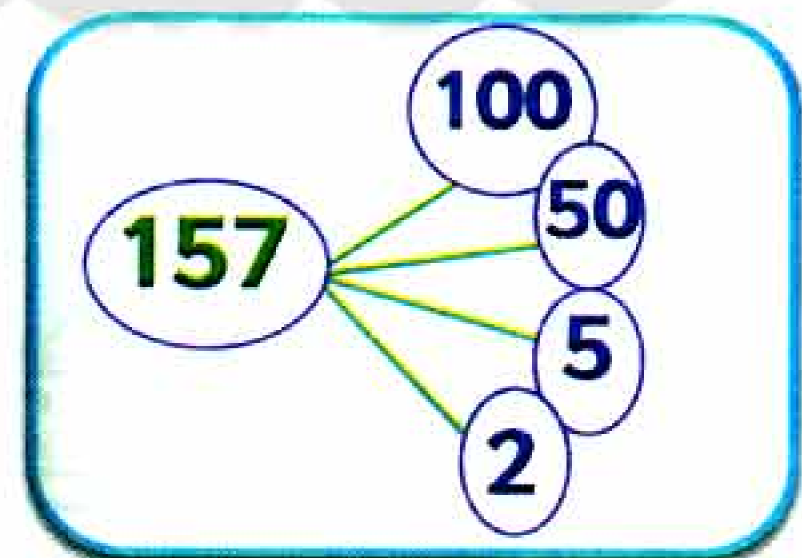
4 Subtract 285 - 157

285 - 100 = 185

185 - 50 = 135

135 - 5 = 130

130 - 2 = 128





Use a suitable strategy to solve the following problems:

1) 56 - 39

....

....

....

2) 94 - 56

....

....

....

3) 76 - 39

....

....

....

4) 82 - 67

....

....

....

Find the result:

1 84 + 69

....

2 261 + 327

....

3 93 − 67

....

4 256 + 341

....

5 313 + 269

....

6 437 - 119

....

7 265 - 119

....

8 621 + 359

....



Lessons (117-120) Writing story problems and solving them

Outcomes

☞ Students will:

- Participate in Calendar Math Activities.
- Add and subtract 2- and 3-digit numbers.
- Write story problems for addition and subtraction equations.
- Apply a variety of strategies to solve addition and subtraction story problems.



Notice

Addition words: total number - total sum - addition result

Subtraction words: difference - less than - more than - left - spent - taken - gave

Example 1

Write a story problem for the problem 42 + 36 and get the sum.

The story problem: The number of students in our class is 42 students and the number of students in my brother's class is 36.

What is the total number of students?

The total number: 42 + 36 = 78 students



Example 2 Write a story problem for the problem 52 - 13 and get the difference.

The story problem: My father gave me 52 pounds; I spent 13 pounds of them.
How many pounds are left?
Pounds left: 52 - 13 = 39 pounds

Activities

Make more story problems:

34 + 40

86 + 95





140 - 65

230 - 157

509 - 256

347 + 256

218 + 257







Review on Chapter (6)

1 Find the result:

791 + 192 = ...	726 + 214 = ...	245 + 316 = ...	276 + 132 = ...
476 - 295 = ...	524 - 234 = ...	760 - 553 = ...	726 - 352 = ...

2 Find the result, using mental math strategies:

341 - 30 = ...

462 + 30 = ...

517 + 340 = ...

739 + 200 = ...

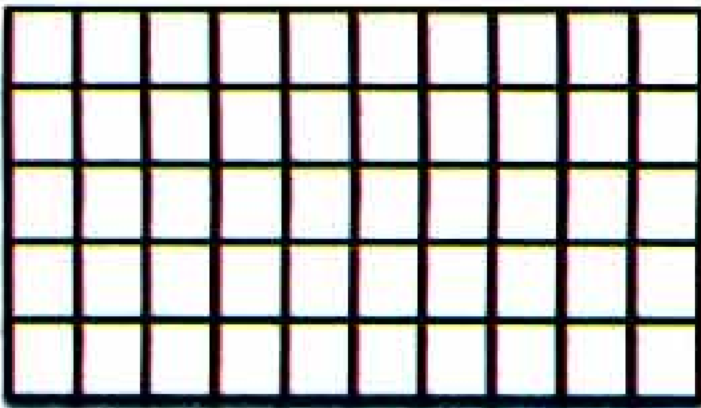


596 - 201 = ...	671 - 99 = ...
687 - 178 = ...	531 -199 = ...
369 - 169 = ...	761 +198 = ...

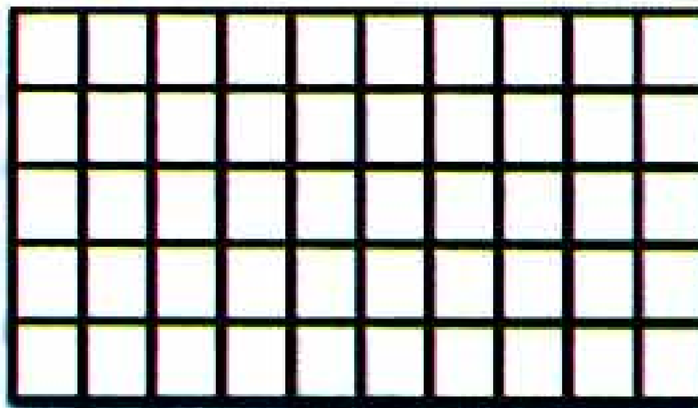
3 Match the arrays to the addition sentences:

7 + 7 + 7	4 by 4
2 + 2 + 2	3 by 2
5 + 5	2 by 3
4 + 4 + 4 + 4	5 by 2
3 + 3	7 by 3

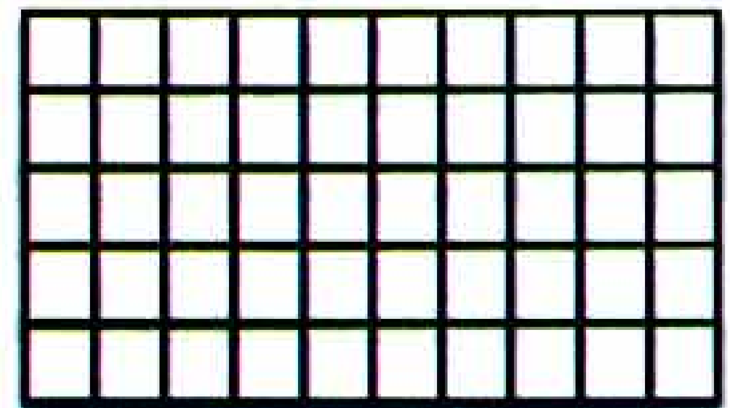
4 Color according to the arrays below:



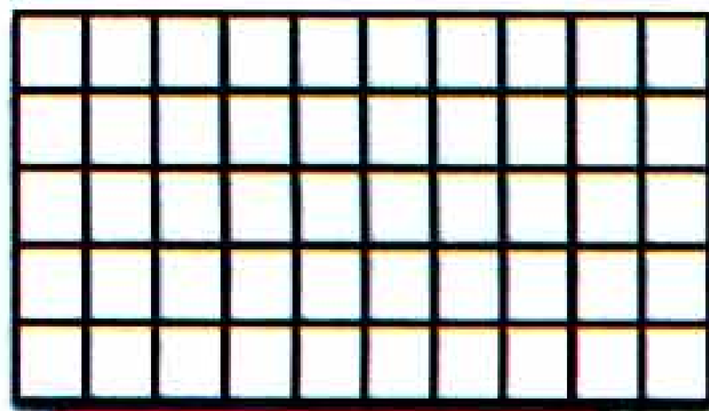
3 by 5



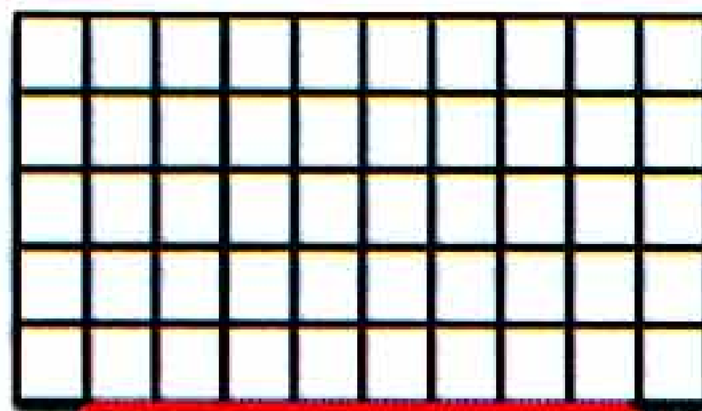
4 by 4



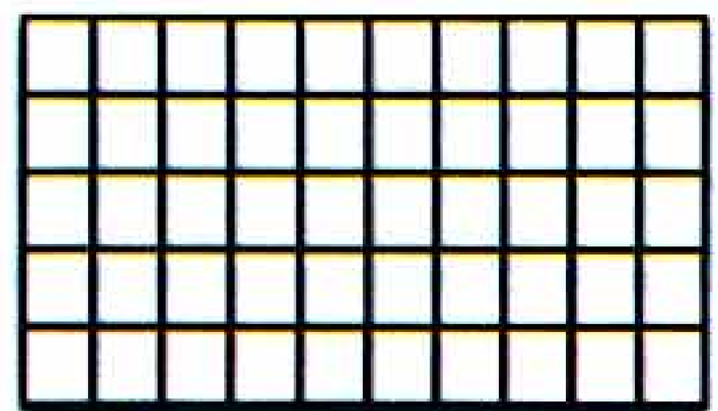
3 by 2



2 by 5



4 by 3



6 by 2

5 Complete the bar graph, then answer the questions below:

50 pupils like football, 30 pupils like basketball,
5 pupils like tennis and 10 pupils like volleyball

Vertical scale

.... Title

Number of students

50				
45				
40				
35				
30				
25				
20				
15				
10				
5				
	football	basketball	table tennis	volleyball

Horizontal scale

Favorite sport

a) What is the most popular sport to pupils? ....

b) What is the least popular sport to pupils? ....

c) How many more pupils like basketball than volleyball?

....

d) Suggest a question, then answer it.

....?

Answer: ....



6 Look at the following pictograph, then answer the questions below:

The following pictograph shows how many flowers picked in 5 days.

Picked flowers

Saturday	🌼 🌼 🌼 🌼 🌼 🌼 🌼 🌼
Sunday	🌼 🌼 🌼 ½🌼
Monday	🌼 🌼 🌼 🌼 🌼 🌼
Tuesday	🌼 🌼 🌼 ½🌼
Wednesday	🌼 🌼 🌼 🌼



a) How many flowers were picked on Saturday?

....

b) How many flowers were picked on Tuesday?

....

c) How many flowers were picked on Sunday and Wenesday together?

....

d) How many flowers were picked on Saturday and Sunday?

....

e) What is the day with the most picked flowers?

....

f) What is the day with the least picked flowers?

....






General Revision

1 Choose the correct answer:

a) 3 fourths = ... ($\frac{2}{3}$ / $\frac{1}{2}$ / $\frac{3}{4}$)

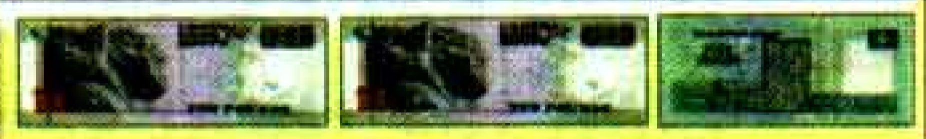
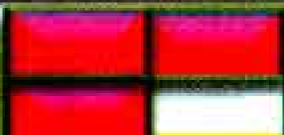
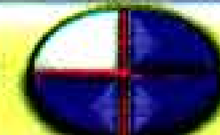
b) The fraction that represents the shaded part [circle] is = ... ($\frac{1}{4}$ / $\frac{1}{3}$ / $\frac{1}{2}$)

c) Two thirds is written as = ... ($\frac{2}{4}$ / $\frac{1}{3}$ / $\frac{2}{3}$)

d) 423 + 127 = ... (550 / 540 / 530)

e) 476 + 200 = ... (even / odd) number.

2 Put the suitable sign (< , > , =):

a) 5 + 50 + 500	☐	555
b) 639	☐	600 + 40
c) 437 - 122	☐	576 - 249
d) 7 hundreds and 3 tens	☐	70 + 300
e) 	☐	
	☐	



3 Find the result:

619 − 97 = ...	450 + 170 = ...	163 − 24 = ...
432 − 17 = ...	700 + 13 = ...	776 − 77 = ...

4 Complete:

a) In the pattern 3, 5, 7, 9, ... , the rule is ....

b) The array is .... by ....

c) 1 part of 4 equal parts represents ....

d) The addition sentence of the array 4 by 2 is ....

5

Hana has LE 426 and his brother Samy has LE 184.
Find the total sum.

The total = ... + ... = ... pounds



6 Complete:

a) The even number between 14 and 18 is ....

b) The estimation of 432 + 276 is ....

c) 4 + 4 + 4 + 4 + 4 is the addition sentence of the array ...... by ......

d) 47, 57, 67, ..., ...

e) ○○● the shaded ball represents $\frac{....}{....}$

7 Subtract mentally:





99 - 10 = ...	546 - 99 = ...
99 - 20 = ...	761 - 101 = ...
99 - 40 = ...	576 - 100 = ...
99 - 9 = ...	366 - 300 = ...
99 - 8 = ...	567 - 60 = ...



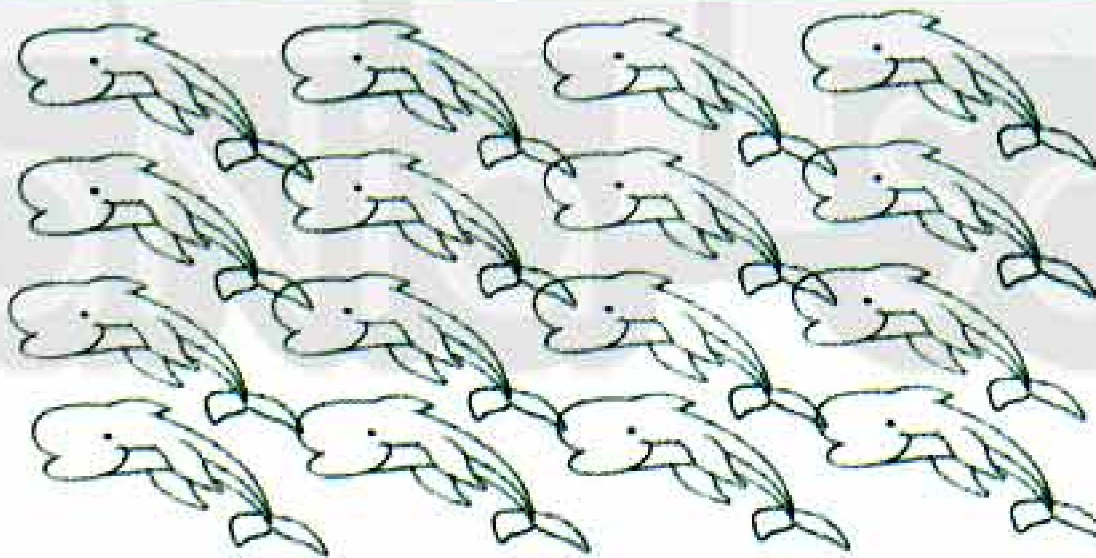
8 A train holds 600 seats. 350 seats are occupied. How many seats are empty?

....

9 Complete using fact families:

35 / 30 / 5	100 / 70 / 30
..... + ... = ...	..... + ... = ...
..... + ... = ...	..... + ... = ...
..... - ..... = ...	..... - ..... = ...
..... - ..... = ...	..... - ..... = ...

10 Color the array 3 by 4, then complete:



a) The number of rows is ....

b) The number of columns is ....

c) The addition sentence of this according to rows is ....

d) The addition sentence of the same array according to columns is ....